

SEP 17 1928

# MOTOR AGE

A Chilton Class Journal Publication  
Published Weekly September 13, 1928

## AUBURN

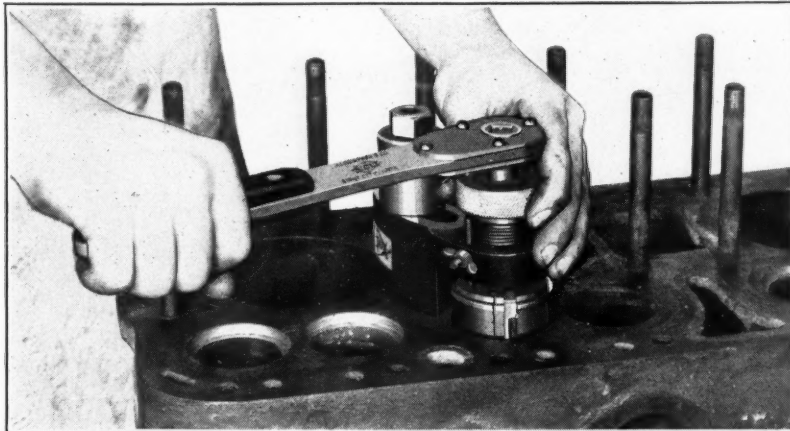
POWERED BY LYCOMING

**During Week of  
June 10th  
Ted Marquard  
A Retail Salesman  
For The  
Auburn Sales Co.,  
Cleveland  
Sold  
33 New Cars**

**What Is YOUR Expectancy?**

Auburn Automobile Company, Auburn, Indiana

# VALVE SEAT RENEWING TOOL



**H**ERE'S a big new source of profits for motor repair shops—valve seat renewing jobs. When the original valve seats are destroyed beyond reconditioning—as so often happens nowadays, with high power motor fuel, closely adjusted valves, high speed driving, steady use, etc., — you can now save the car owner the big expense of a new motor block. Simply bore out the old valve seats with a Sioux Valve Seat Ring Tool and insert Sioux Valve Seat Rings of special heat-resisting iron alloy. It's easy with the Sioux—no chance to cut the hole oversize or too deep—no wobbling or traveling. It will pay you to look into this.

**Your Jobber Sells It.**

ALBERTSON & CO., Inc., Sioux City, Ia., U.S.A.



No. 770 Valve Seat Tool Set, Net Complete \$44<sup>00</sup>



# WANTED!

## SALES and ADVERTISING RESEARCH MANAGER

A large automobile manufacturer is seeking a man to head a department for conducting practical research studies bearing on its advertising and merchandising operations.

This man should be of the executive type with a mind trained along technical lines but tempered with a psychological viewpoint. He should have practical advertising and selling experience. He must have cooperative ability to an unusual degree and be able to "sell" his ideas to others.

He should know how to write in a simple, direct and forceful style.

The work is of a new and unusual character. The man will have to build his job as he goes along. He must have youth, adaptability, imagination and the desire to work hard.

Please give age, salary requirements and summary of experience and education.

All communications treated confidentially.

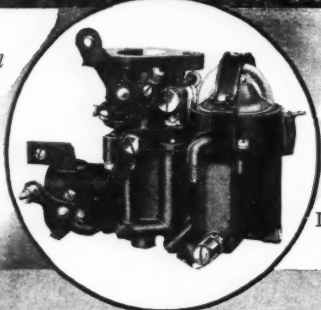
Box 6325, Chilton Class Journal Company  
710 Stephenson Bldg. Detroit, Michigan

# Consistent in good performance

## Consistent In Good Sales and Profits



PIKE'S PEAK  
14,147 ft.  
above sea level



DEATH VALLEY  
310 ft. below  
sea level



THE engineer specifying a carburetor for a year's series of motor cars knows that it is not the performance of one or two cars—not the results obtained from a week's horsepower tests on the dynamometer under the delicate adjustment of a skilled operator that determines the desirability of a certain type carburetor—but good performance from thousands of carburetors—both foreign and domestic, winter and summer.

Good performance on the same adjustment in Death Valley and up Pike's Peak won Stromberg Plain Tube Carburetors the favor of the production, service, sales and engineering departments of conscientious manufacturers.

The latest development of the Stromberg laboratories is the Model "U" Syringe Carburetor.

Designed to provide maximum power and speed, as well as extraordinary smooth operation when engine turns over slowly.

The ingenious pump attachment (called the Syringe) gives that quick, snappy acceleration that is the delight of the modern motorist.

Excellent performance without sacrificing economy in fuel consumption.

*It will pay you to look into the Stromberg Service Station Proposition—Write today.*

**STROMBERG MOTOR DEVICES CO., 58-68 EAST 25th STREET, CHICAGO**

# STROMBERG

## CARBURETOR

**"The Accepted Standard"**

# MOTOR AGE

Vol. LIV

Reg. U. S. Pat. Off.  
Established 1899

No. 11

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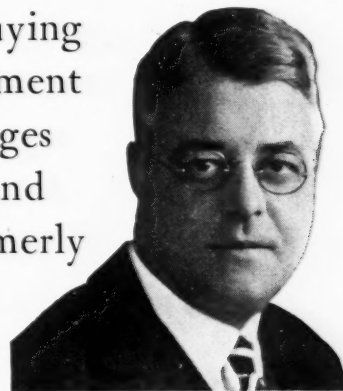
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## Simple System

### Saves Service Men's Time and Money

New Way of Buying  
Charging Equipment  
Offers Advantages  
of Economy and  
Service Not Formerly  
Enjoyed



By Mason T. Rogers, President, Burton & Rogers Mfg. Co., Boston, Mass.

**D**URING the four years of its existence, the Burton & Rogers Mfg. Co., through constant improvement in design and manufacture, has reached a dominating position in the Battery Charger field. This Company was the first to recommend the use of balanced full-wave rectification, making it possible to charge batteries safely in ten to twelve hours.

Now recognizing the need of greater economy for the Service Man, three new service features are offered to users of B & R Chargers.

#### Gold Bond Guarantee on Battery Chargers

We are going to sell all Burton & Rogers Battery Chargers under a Gold Bond Guarantee, covering satisfactory service for one year. Under this guarantee our jobber-distributors will be authorized to replace any chargers not giving satisfactory service (aside from the natural wearing out of bulbs) without even referring the matter to us and without additional cost to the owner, at any time within one year from date of purchase.

#### Used-Charger Trade-in Allowance

We are also offering a definite flat used-charger trade-in allowance on all Burton & Rogers Chargers, of 33 1/3%. That is to say if you own a battery charger and wish to buy a new one, your jobber will allow you 1/3 of the list price of the present B & R Charger of the same capacity, in trade on a new charger, irrespective of the number of years you have had it or of its condition. As prices on B & R Chargers have been reduced during the last year, this is all to your advantage. We find that the natural value of Burton & Rogers Chargers and our manufacturing and service facilities make it possible for us to do business on this extremely liberal basis.

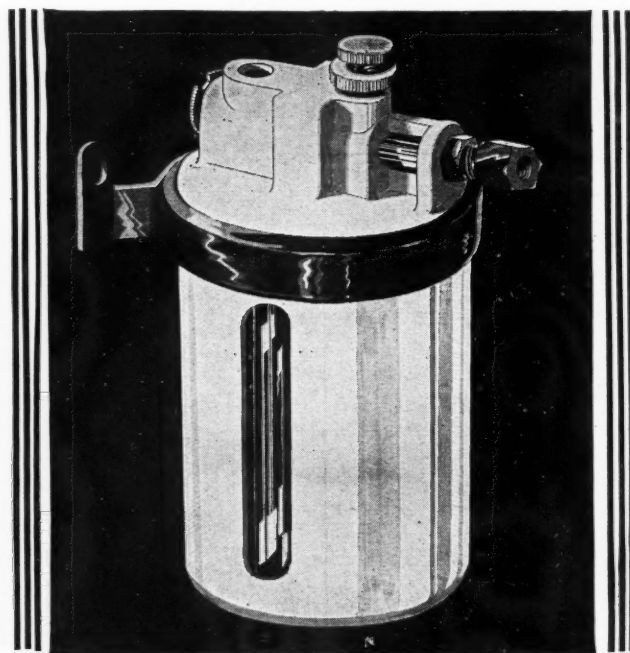
#### Reconditioning Service on Battery Chargers on a Flat Rate Basis

We also offer all battery charger owners a flat rate charge for completely overhauling and renovating their chargers on the basis of a 10% per year. If an operator's charger becomes acid eaten or shop worn but still gives good service within a year from date of purchase, he can have his machine thoroughly reconditioned and made like new for 10% of the original list price. If it is in its second year of operation, it will cost 20% of the list price and if in its third year, 30%.

These "New Sale," "Trade-In" and "Service Terms" on Burton & Rogers Battery Chargers give the purchaser advantages that have never before been offered.

**B & R**



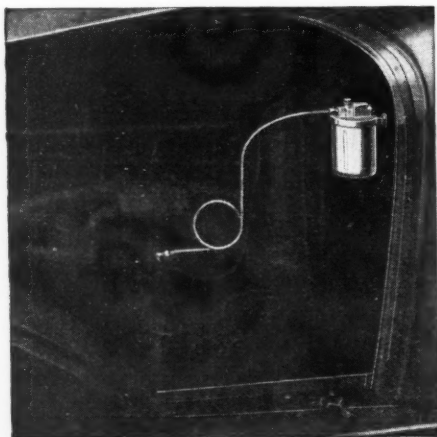


*Most likely you fit into the profit-making possibilities the Decro-oiler offers you.*

The Decro-oiler is packed complete in its green and black carton with sufficient Decro-oil for approximately 500 miles. Easy to install. Quick to demonstrate its effectiveness. Every Decro-oil sale means repeat business and profits on Decro-oil—the original green oil for combustion chamber lubricators.

EVERYWHERE, the Decro-oiler is selling by the thousands. Each month shows a doubling of sales over the previous month. The automobile trade is rapidly discovering the moneymaking possibilities this fast-growing business has placed in its hands. The Decro-oiler sales set-up is far beyond any experiment. It is perfected! And most likely you can fit yourself into its moneymaking possibilities. Don't wait too long. Write now for the Decro-oiler story.

The Decro-oiler takes lubrication where it is needed most—right to the upper cylinder rings and valves—right where you've never had adequate lubrication before. There it gives a perfect bond of lubrication, sealing the pistons for maximum compression, quicker pick-up, rhythmic smoothness.



*Easier Starting—Quicker Pick-up*

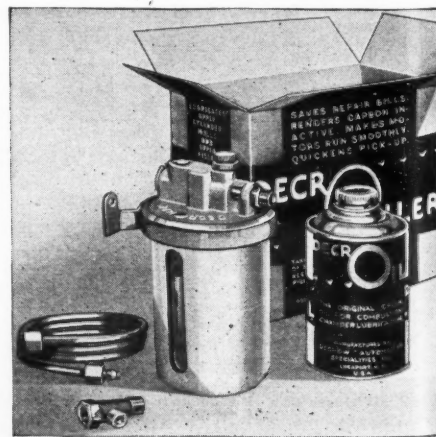
And most important of all—the Decro-oiler renders carbon inactive and eliminates stickiness in valves.

DECROW AUTOMOTIVE SPECIALTIES  
Incorporated

Lockport

New York

**DECROILERS**



# 12 consecutive months of **STUDEBAKER** sales increases

**S**MART, new body styles—*proven* performance—exclusive features such as Studebaker's ball bearing spring shackles—these and many other advantages have turned the eyes of buyers everywhere toward Studebaker showrooms!

July and August retail sales showed big gains over the corresponding months of 1927—rounding out 12 consecutive months of sales increases!

Twelve months of increased profits for Studebaker dealers! During the same 12 months Studebaker established and now holds 114 official speed and endurance records—climaxed by The President Eight's great feat of 30,000 miles in 26,326 consecutive minutes.

With four great lines of sixes and eights to sell—ranging from \$835 to \$2485—the Studebaker franchise offers the greatest money making opportunity in the industry. Write or wire for further particulars.

## New Contract for towns and villages

For small communities Studebaker offers an unusually profitable contract. Hardly any capital is necessary. No shop need be operated. No used cars need be handled. No commitments need be made to purchase any particular number of cars. You may confine your selling effort to the opening wedge of the line—The Erskine Six at \$835 f. o. b. factory. Maintaining an Erskine demonstrator entitles you to sell all other Studebaker models—not only Commander, Dictator and President Straight Eight, but a profitable and popular line of commercial cars as well. Mail the coupon **TODAY**, or write direct to Dept. 51 for information.

THE STUDEBAKER CORPORATION OF AMERICA  
Dept. 51, SOUTH BEND, INDIANA

Please send me full information on the Studebaker-Erskine franchise.

Name .....

Street Address .....

City and State .....

My present business (if selling cars now, state make) .....

# NEW LAPS Systems

REG. U. S. PAT. OFF.

with Parts Index System, Bin Loading Diagram, *Movit* quick-change dividers

Stock Record Card furnished for use in Parts Index Board

NAME OF PART	PART NUMBER	LIST PRICE	LOCATION			MIN.	MAX.
			UNIT	SHELF	BIN		
CON. ROD	18131	2 10	12	A	4	4	8
PISTON					7	8	16
FAN					3	1	3
						3	7
						2	5

MOVIT, the quick change divider fastener that makes every bin in a LAPS System instantly adjustable and eliminates the use of bolts in fastening dividers.

PATENT APPLIED FOR

Parts Bin Loading Diagram for unit 1 of the 2 unit system in background. This diagram indicates location of bins in car assembly group where parts are to be stored.

Parts Index Board furnished with every new LAPS system. It provides a complete stock index record for every part stored in the bins.

END IRONS for LONG PARTS

A 2-UNIT LAPS SYSTEM

Instantly adjustable in bin Size and Arrangement — Adaptable to any method of Parts Storage

WHEN you purchase a new LAPS System you get the following proven advantages of parts storage and stock record keeping.

(1) Correctly designed parts bins for a balanced stock with labels for every bin.

(2) A parts index system that is adaptable to listing parts as in any car manufacturer's parts book, or in accordance with your own method of listing and locating parts, or listing and locating parts numerically, alphabetically, grouped by car assembly numerically or grouped by car assembly alphabetically.

(3) MOVIT, the divider fastener that makes every LAPS divider a quick change divider. This feature is

used exclusively in LAPS and provides for the quickest rearrangement of bins or bin sizes possible to keep system up to date with shifting parts stocks and new car models.

(4) A system that will fit your stock requirements. LAPS systems are built in various sizes ranging from a 1 unit system carrying a \$500 stock, to a 24 unit system carrying a \$16,000 stock.

Ask your jobber to give you full details on Lupton Auto Parts Storage Systems and make certain you get MOVIT, the quick-change divider fastener. Manufactured exclusively by David Lupton's Sons Company, General Motors Building, Detroit, Mich.

## LUPTON AUTO PARTS STORAGE

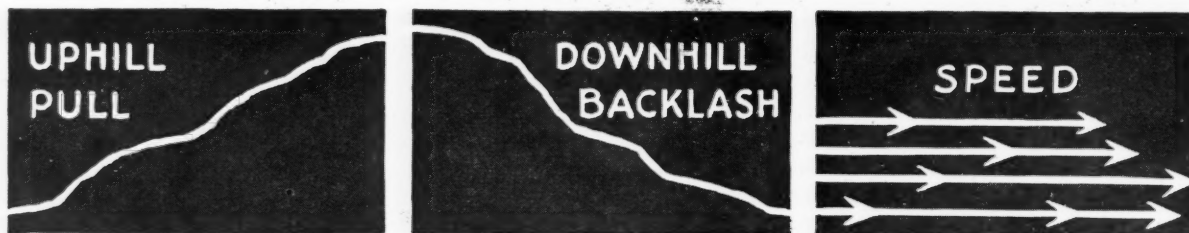




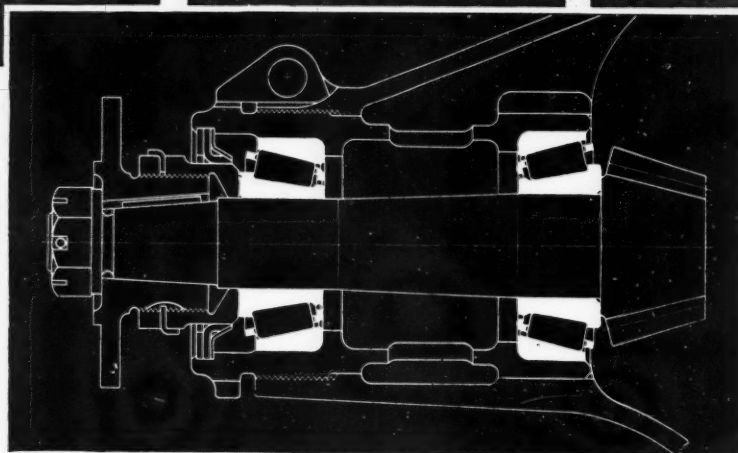
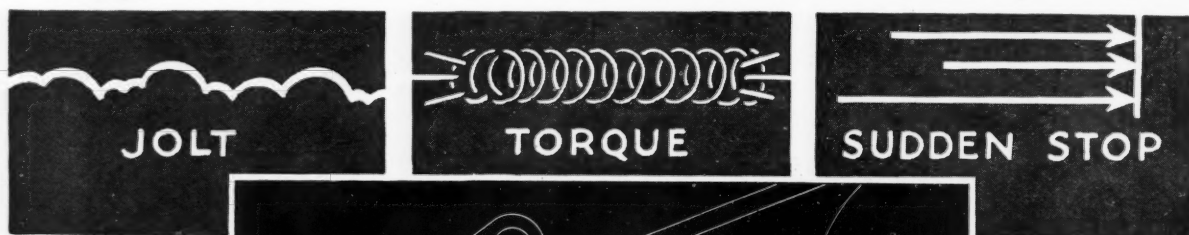
**N**EW DEPARTURE Ball Bearings are functioning successfully in the front and rear wheels, transmission, pinion, differential, clutch or ignition in millions of automobiles without requiring readjustments or attention throughout their longer life—150,000 QUALITY bearings produced daily to meet the demand of a great majority of American motor car models—the bearing that costs more, but the cost is actually a saving.

## New Departure Ball Bearings

The New Departure Manufacturing Co.  
*Bristol, Connecticut*  
Chicago • Detroit • San Francisco



## TO SERVE..TO SAVE..TO SURVIVE



A thousand devils of travel continually attack the pinion drive—only the best bearings are good enough to serve—to save—to survive.

Perhaps this accounts for the manner in which sentiment swings unmistakably to Timken.

For Timken Bearings are *more* than anti-friction. They are fully thrust-radial, provide greater load carrying capacity that sets at defiance the thrust and shock from any and all directions. *Extra* miles of smooth, quiet, trouble-free travel are assured only by Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS*, and Timken-made electric steel.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

# TIMKEN Tapered Roller BEARINGS



# MOTOR AGE

VOLUME LIV

Philadelphia, September 13, 1928

NUMBER 11

## New Production Mark Probable

High August Total and Strong  
Demand Point to New  
High

## ALL STOCKS LOW

NEW YORK, Sept. 12—Preliminary figures of an August production of 485,000 cars and trucks carry with them the virtual certainty that the automotive industry will set up a new production record in 1928. To do this it must exceed the 4,424,538 total set up in 1926. With the August output the present year is about 72,000, less than one week's output, behind production in the first eight months of 1926.

Output in the last quarter of 1926 slowed down sharply after high operations through the early year, culminating with a 410,000 output in September, that year. Operations in the present September promise to at least approximate the September, 1926, figure.

Reports from leading centers indicate that cars are moving into the hands of retail purchasers at a rate closely approximating factory production. There is only limited accumulation of either new or used car stocks by dealers and many are behind on deliveries. This condition in the retail field differs widely from conditions in the latter part of 1926, factory operations then being checked sharply because of high stocks in the retail field. Retail sales in July in 17 representative cities showed an increase of 38 per cent over July last year.

### Sloan for Hoover

NEW YORK, Sept. 11—Alfred P. Sloan, Jr., president of the General Motors Corp., has issued a statement indorsing Hoover for president.

"In making that statement," he said, "I want to emphasize that it is my position as an individual and has nothing to do with any business enterprise in which I may be connected."

### Nash Goes Abroad

NEW YORK, Sept. 11—C. W. Nash, president of Nash Motors Co., sailed today on the Swedish-American motorship Girpsholm for Gothenburg, whence he will go to visit the Paris and London shows.

### Chicago Air Office First of Its Kind In United States

CHICAGO now has a union ticket office, depot and information bureau for air passengers, the first of its kind in America. The station has been opened in the Palmer House, it is announced by Thomas Wolfe, Jr., president of the Chicago Air Traffic Association.

### C. B. Durham Honored

DETROIT, Sept. 10—Cady B. Durham, vice-president and assistant general manager of Buick Motor Co., has been elected president of the Flint Chamber of Commerce.

### H. A. Trevelyan Advanced

CHICAGO, Sept. 11—H. A. Trevelyan has been appointed branch manager of the Olds Motor Works branch at Chicago, it was announced yesterday by D. S. Eddins, vice-president and general sales manager of Olds Motor Works.

### Lyons With De Soto

DETROIT, Sept. 11—J. R. Lyons has been appointed district manager for the De Soto Motors Corp., division of Chrysler Corp., at Atlanta, Ga., succeeding John H. Gordan.

### Tarbox Back Home

PHILADELPHIA, Sept. 11—John P. Tarbox, attorney for The Edward G. Budd Mfg. Co., has just returned from a business trip to Europe.

### Miliam at Portland

PORTLAND, ORE., Sept. 11—W. Stanley Miliam, zone manager for the Willys-Overland factory, has recently returned to Portland.

### Van Wagner With Moon

ST. LOUIS, Sept. 10—Stanley Moon of Moon Motor Car Co. announces the appointment of J. C. Van Wagner as district manager covering south Texas territory.

### Eldridge Heads Reo Sales

DETROIT, Sept. 10—C. E. Eldridge has been named general sales manager of the Reo Motor Car Co., succeeding C. A. Triphagen, resigned. Mr. Eldridge has been affiliated with the automotive industry for 12 years and has spent all of that time with Reo. His first position was as assistant manager of the Chicago branch.

## Chevrolet Builds Millionth for '28

Record Achieved by Turning  
Out Complete Car Every  
10 Seconds

## BRIEF CEREMONY

DETROIT, Sept. 8—Chevrolet Motor Co. reached a new milestone in its manufacturing history last week. With production and sales continuing at a record September clip, the millionth car of 1928 came off the assembly line at Flint last Tuesday afternoon.

Due to the high September production schedule necessary to meet an unusually heavy fall demand, no formal ceremonies marked the occasion, although W. S. Knudsen, president of the company; R. H. Grant, vice-president in charge of sales; C. F. Barth, vice-president in charge of manufacturing, and other Chevrolet officials were present.

The record-making car was a coach, one of the most popular models in the line. It was a standard model in every respect. Like hundreds of thousands of Chevrolet coaches it was finished in avenue green Duco, with Tartan tan wheels, black beading and striping in gold.

After a brief informal ceremony the millionth car passed through the usual channels of distribution and was shipped a few hours after it came off the line to a dealer in the Middle West.

An idea can be grasped of the immensity of the task of building 1,000,000 cars in less than eight months when it is borne in mind that to achieve this record it was necessary that a Chevrolet be built approximately every 10 seconds of every working day.

### Warden-Harvey on Trip

DAYTON, Sept. 10—D. W. Warden, vice-president in charge of merchandising for Dayton Rubber Mfg. Co., is spending the first half of September in the southern territory. Lynn Harvey, manager of tire sales for the "Thorobred" organization, is in the northern sector.

### W. A. Hall Advanced

CLEVELAND, Sept. 7—W. A. Hall, general manager of the Cleveland branch of the Graham-Paige Motors Corp., has joined the factory staff at Detroit.



## Unusual Features for Dallas Show

Buses and Airplanes to be Exhibited; Interior Track for Cars

DALLAS, Sept. 8—The annual show of the Dallas Automotive Trades Association, October 6-21 inclusive, will be a complete display of motor transportation, the first exhibition of the kind in the history of the Southwest. This year's show will embrace two entirely new features—buses and airplanes. More than 10,000 square feet of space will be devoted to a display of buses and bus equipment. The airplane division of the show will be in charge of the National Air Transport, Inc., and the Texas Air Transport, Inc. It is announced a dozen airplane manufacturers will have exhibits.

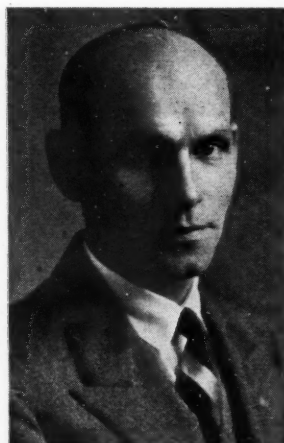
The car division of the show will feature an exhibition of the various models and makes in action under their own power on a circular track within the big show building.

### Sign 10,000 Car Contract

SPOKANE, WASH., Sept. 7—A contract to sell 10,000 Willys-Knight and Whippet cars through its three retail houses at Seattle, Yakima and Spokane and associated dealers in Washington, Alaska, northern Idaho and western Montana has been signed by Transport Motor Co. with Willys-Overland, Inc. August Johnson, president of the Transport firm, signed for his organization, and Colin Campbell, vice-president in charge of sales for Willys-Overland, represented his house.

The contract is for the fiscal year

## Advanced



Gustav Ingold

FOR the past four years Mr. Ingold has been service manager of Auburn-New York Co.; he has recently been promoted to be supervisor of service and maintenance in all foreign countries for the Auburn Company.

that began Sept. 1. The retail sales value of the cars at Northwest prices is estimated at \$10,500,000. The contract for the year ending Aug. 31, 1928, called for only slightly over 5000 cars.

### Prichard With Bancroft

ROCHESTER, N. Y., Sept. 10—Charles H. Prichard, for many years connected with the automobile industry in this city, is now with Bancroft Motors, Inc.

## Hupp Adds Big Unit to Plant

New Building to Double Shipping Capacity; Give Space for Engineers

DETROIT, Sept. 7—To keep pace with the continued heavy demand for Hupmobile cars, Hupp Motor Car Corp. announces that contracts have been let for a new unit of its Detroit plant, which, it is stated, will double the shipping capacity of the company.

Operations on the new building are to be pushed as rapidly as contractors can carry on the work, and it is predicted by company officials that the structure will be ready for occupancy by the first of the year.

The plans provide for an eight-story building, fronting a little more than 200 feet on Mt. Elliott Ave. and running back to a depth of approximately 150 feet. Seven of the eight floors will be devoted to car storage purposes, the top floor being given over to offices of the engineering department and the basement housing the engineering laboratory. Shipping decks and tracks are included in the project. A bridge across Mt. Elliott Ave. will provide means for transporting finished cars.

### Thomas W. Connor Dies

DETROIT, Sept. 8—Thomas W. Connor, recently retired president of Ditzler Color Co., died suddenly after an operation in Rochester, Minn. For more than 25 years Mr. Connor was an official of the Detroit White Lead & Color Works, and for 15 years prior to his retirement three years ago he headed the Ditzler company.

## The Automotive Calendar

### SHOWS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.  
Baltimore, 5th Regiment Armory, Jan. 19-26.  
Boston, Mechanics Bldg., March 2-9.  
\*Chicago, National, Coliseum, Jan. 26-Feb. 2.  
Cincinnati, Music Hall, Jan. 13-19.  
Cleveland, Public Auditorium, Jan. 26-Feb. 2.  
Dallas, Texas, Oct. 6-21.  
Denver, Colo., Auditorium, Feb. 11-16.  
Detroit, Convention Hall, Jan. 19-26.  
Eastern States Exposition, Springfield, Mass., Sept. 16-22.  
Kansas City, Mo., American Royal Bldg., Feb. 9-16.  
Los Angeles, Washington Park, March 2-10.  
Louisville, Ky., Armory, Jan. 21-26.  
Milwaukee, Wis., Auditorium, Jan. 12-19.

National Standard Parts Association, Cleveland Auditorium, Oct. 29-Nov. 3.  
Newark, N. J., Jan. 12-19.  
\*New York, National, Grand Central Palace, Jan. 5-12.  
Peoria, Ill., Feb. 5-9.  
Philadelphia, Commercial Museum, Jan. 12-19.  
Salon, Automobile Salon, Inc., Hotel Drake, Chicago, Jan. 26-Feb. 2.  
Salon, Los Angeles Motor Car Dealers Assn., Biltmore Hotel, Oct. 17-20.  
Salon, Automobile Salon, Inc., Hotel Biltmore, Los Angeles, Feb. 9-16.  
Salon, Automobile Salon, Inc., Hotel Commodore, New York, Dec. 2-8.  
Salon, Automobile Salon, Inc., Palace Hotel, San Francisco, Feb. 23-March 2.  
San Francisco, Civic Auditorium, Jan. 26-Feb. 4.  
Springfield, Mass., Municipal Auditorium, Feb. 25-March 2.  
St. Louis, City Market Bldg., Feb. 4-9.  
Syracuse, Feb. 4-9.

Pennsylvania Automotive Association, Allentown, Pa., Oct. 15-16.  
World Motor Transport Congress, Rome, Sept. 25-29.

### CONVENTIONS

Automotive Equipment Association, Coliseum, Chicago, Oct. 22-27.  
National Standard Parts Association, Hollenden Hotel, Cleveland, Oct. 29-Nov. 3.  
Ohio Council, National Automobile Dealers' Association, Hotel Gibson, Cincinnati, Sept. 13-14.  
S.A.E.  
Detroit, Book-Cadillac, Annual Meeting, Jan. 15-18.  
Newark, Robert Treat Hotel, Transportation Meeting, Oct. 17-19.  
New York, Annual Dinner, Hotel Astor, Jan. 10.

### RACES

Salem .....Oct. 12  
\*Will have special shop equipment exhibit.

Oct. 10—Marketing Annual for 1929—Motor World Wholesale.  
Nov. 17—Production and Factory Equipment Issue—Automotive Industries.



### *Pace Makers Hold Annual Convention*

*PART of the program arranged for the entertainment of 50 members of the Marmon Pace Makers' Club for retail salesmen during their recent three-day convention included a trip through the plant units of the Marmon factory and the Murray Body Corp. Arriving at the factory, the visitors were greeted by H. L. Purdy, vice-president of the Marmon company. Photograph shows the party at the Marmon factory*

### **St. Louis Salvage Yard Opens**

ST. LOUIS, Sept. 10—The St. Louis Automobile Dealers' Salvage Co. and members of the dealers' association, assembled to witness the dissection of the first "victim," a 1923 Ford roadster. The first customer of the salvage yard was a man who bought a headlight lens salvaged from the Ford. "Bob" Lee, secretary of the dealers' association, had promised to offer his 10-year-old Ben-Hur as the first victim of the yard, but backed down. Lee now claims that the Smithsonian Institution has put in a bid for the vehicle.

### **Trainload for De Luxe Co.**

ST. LOUIS, Sept. 7—A trainload of De Soto cars was received last week by De Luxe Motor Car Co., local De Soto distributor. The company took orders for 57 cars the first week that the new line was placed on the market.

### **White Advanced by Lurie**

ST. LOUIS, Sept. 8—Joseph H. White has been appointed wholesale manager for Lurie Motor Car Co., Studebaker distributor. White started as mechanic

for Ralph de Palma and has been identified with the industry in St. Louis for a number of years.

### **Weber Gets Trainload**

ST. LOUIS, Sept. 10—A trainload of new Graham-Paige cars having a retail value of \$125,000 was received by Weber Motor Car Co. this week. The consignment is one of the largest ever received by a St. Louis dealer.

### **Von Noble Adds Jordan**

MILWAUKEE, Sept. 9—H. Von Noble, 2620 Wisconsin Ave., has been appointed Jordan distributor, following the transfer of the Marmon franchise to the Osmond Jordan Co., which is now known as the Osmond Marmon Co. Mr. Von Noble has been associated with the wholesale and retail passenger car trade in Milwaukee for more than 15 years.

### **Moon Gains on Coast**

ST. LOUIS, Sept. 11—Moon Motor Car Co. reports an increase of 140 per cent in its July sales on the Pacific Coast over the same month last year.

### **Sauers Gets Big Territory**

SPRINGFIELD, MASS., Sept. 10—R. M. Sauers, Inc., has been appointed distributor of Chrysler and Plymouth for Hampden, Hampshire and Berkshire counties in this state; Bennington and Windham counties in Vermont and a section of northern Connecticut. A new sales and service building will be erected for the Plymouth.

### **Wesley Monk Resigns**

BOSTON, Sept. 10—Wesley E. Monk, Commissioner of Insurance for Massachusetts, around whom has raged a battle over his increase of insurance rates for cars, in some cases nearly 100 per cent, has resigned. Just what effect his resignation will have on the rate situation is not known now, but it is believed that the old rates may remain in force.

### **Show Cars at Horse Show**

ROCHESTER, N. Y., Sept. 12—Seventeen automotive dealers are exhibiting their products at the annual Rochester Exposition and Horse Show being held at Edgerton Park here this week.



## Deplores Use of "Junk-Yard" Cars

Cannon Comments on Licensing of Vehicles Not Worth Taxing

MILWAUKEE, Sept. 11—Announcement by the tax commissioner of Milwaukee, that his department has ignored 10,000 passenger cars from personal property tax assessment this year because their value was so low that it cost more than the revenue to collect the tax, has brought a statement from Francis A. Cannon, executive secretary of the Milwaukee Automotive Trades, Inc., that is of interest: "These cars constitute a serious highway hazard and a menace," said Mr. Cannon. "Many accidents are caused by defective cars. In many instances these cars are in the hands of people not financially responsible. Our association started a salvage yard, where it is now wrecking thousands of such defective cars and removing them from traffic. Parts in good condition are sold to the public; the rest is disposed of as junk. We have laws against fire hazards, to protect public health, promote industrial safety, etc., and yet we permit over 10,000 vehicles to run on the streets of Milwaukee which are a menace to life and limb."

"Wisconsin must come to the growing idea of refusing licenses to cars that are mechanically defective."

### Ford Passenger Plane

DETROIT, Sept. 10—Ford Motor Co. has delivered to Northwest Airways, St. Paul, Minn., the first de luxe trimotored Ford transport plane.

The plane, a 14-passenger machine, having a potential speed of 140 miles an hour, will take passengers from trains at Chicago and carry them to

### Salesman Fails to Get Ford, Asks Damages for Delayed Delivery

IN a suit believed to be the first of its kind on record, Raymond T. Collins, traveling salesman, has asked damages of \$500 from H. J. Berning, Ford dealer of Cincinnati, because of delayed delivery of an automobile. In the action filed in Common Pleas Court, Collins says he entered his order June 6, with the understanding he would get one of the first Ford cars to be delivered. He alleges Berning has received a number of new cars, but has refused to deliver one to him, with the result that his business has been damaged to the extent of \$500.

St. Paul, where they will board fast trains for the Pacific Northwest.

### Canadian Output Up

DETROIT, Sept. 8—Canada produced during July, 25,226 automobiles, valued at \$14,399,432, compared with 10,897 cars, valued at \$7,031,869, in July last year. In July 4210 cars were imported and 8057 cars were exported. For the seven months ending July the cumulative production was 150,214 cars, having a sales value of \$97,503,690 compared with 137,795 cars, valued at \$87,975,776, during the corresponding period of 1927. During the seven months imports totaled 34,145 cars.

### Capital to Build Plane

LANSING, MICH., Sept. 8—Capital Aircraft Co. will begin production of a two-place, 60 hp. monoplane Sept. 10. Present plans call for the production of two planes a week at the start.

## Thirteen Lucky For This Dealer

Hoodoo Number Has Failed to Do Its Stuff in Becker's Case

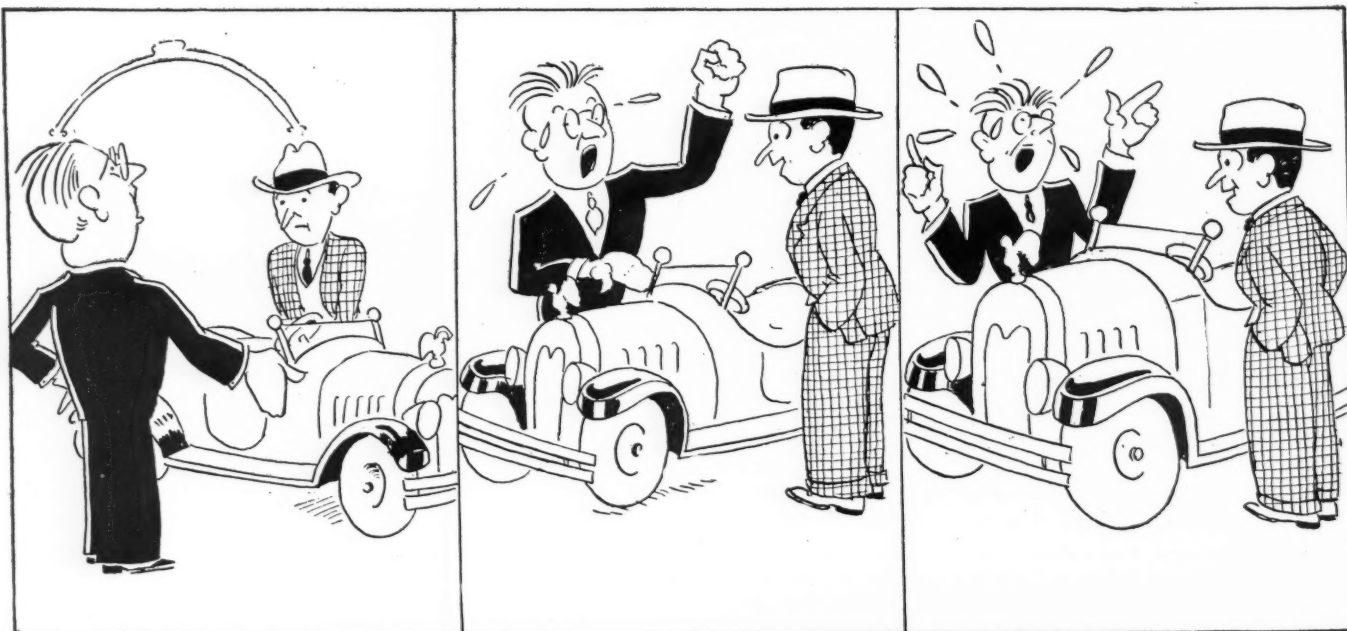
ALTOONA, PA., Sept. 11—The number "13" has played a prominent part in the career of Curtin J. Becker, well known automobile accessory dealer in this city.

To begin, there are exactly 13 letters in his name. He served as a sergeant in the United States air service, during which he was a member of the 166th aero squadron, these figures totaling 13. His first billet was line No. 13 at Kelly Field, Tex. He left the camp on a troop train of 13 coaches and arrived at Weehawken, N. J., on track 13, at 13 minutes past 1.

His command was in New York 13 days, crossing the Atlantic on the U. S. S. Cedric in 13 days on the boat's thirteenth trip in transport work. He trained in England 13 days more than four months, arriving in France Aug. 13. It took thirteen days to get to the first airdrome. While in action, his corps had 13 pilots and engaged in 13 raids over German lines.

### Mathers Forms Company

CINCINNATI, Sept. 7—William H. Mathers, for several years representative of Gabriel Snubber Co., has formed a corporation under the name of William H. Mathers, Inc., and taken over a new building with a diversified line of automobile parts and accessories, including Gabriel snubber, Purolator oil filter, Westinghouse vacuum brake, Jay lubricator, and Weisman trunk. The new building contains 7500 ft. of floor space and is equipped with hydraulic lifts and up-to-date equipment for the servicing of automobiles.





## Vane to Address NADA Council

Program of Annual Meeting  
Includes Prominent  
Speakers

COLUMBUS, OHIO, Sept. 10—The program for the annual meeting of the Ohio Council, National Automobile Dealers' Association, to be held at Cincinnati, Sept. 13 and 14, has been completed by G. R. Ford, acting manager of the council and officials of the national body. One of the features of the meeting will be the talk by C. A. Vane, general manager of the National Association, on "What 1928 Has Shown the Dealers." Mr. Vane will make a resume of the year's activities and point out some of the salient points to be looked after next year.

Other speakers will be Col. Chalmers Wilson, commissioner of the Motor Vehicle Department of Ohio; J. W. Loranger, supervisor of districts of the Packard Motor Co.; M. D. Graham, Warren Griffith and A. B. Waugh.

### Form Elmira-Cadillac Co.

ELMIRA, N. Y., Sept. 7—Elmira-Cadillac Corp. has been formed here with Thomas J. Bush president and general manager. Herbert A. Crooke of Laurelton, L. I., is vice-president; Elwood B. Crocker of Elmira, secretary, and Philip T. Allen of Philadelphia, treasurer. Clare A. Lacey is assistant secretary and treasurer. The Elmira-Cadillac Corp. has taken over the business, equipment and stock of the Genesee Motor Co., which has handled Cadillac since 1910.

### Moon Shows Steady Gains

ST. LOUIS, Sept. 10—Stanley Moon, of Moon Motor Car Co., states that the Moon-Aerotype is gaining in popularity

in every section of the country from coast to coast. He specifically mentions the West Coast as showing an increase of more than 200 per cent compared with last year.

### To Distribute De Soto

MILWAUKEE, Sept. 8—Dietz-Whitney Motor Sales Co. is a newly formed organization which has been granted the De Soto Six franchise for distribution in virtually the entire Wisconsin territory. Members of the new firm are Leslie J. Dietz, since 1918 a factor in the Milwaukee trade and Paul Whitney, for many years associated with the Ford trade in Chicago. Headquarters have been established at 3626 Wisconsin Ave.

### Zimmerman Adds Hornbeck Co.

COLUMBUS, Sept. 10—Hornbeck Motor Co. has been taken over by Walter B. Zimmerman Co. and made a branch sales agency and service station for Hudson and Essex lines. D. C. Hornbeck continues as general manager of the branch.

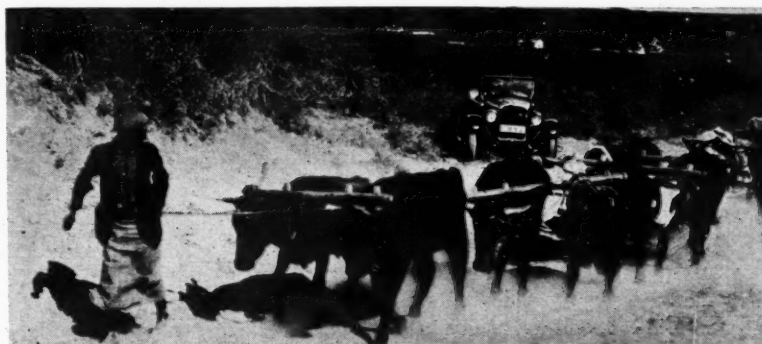
### Reo Shipments Set Record

LANSING, MICH., Sept. 10—Reo shipments set a new all-time August record with 4823 units as compared with a previous high record of 4468 established in August, 1927. Reo officials state that shipments for the first eight months of the calendar year exceed shipments for any full calendar year in the company's history with the single exception of 1927, while the eight months' total for even that record-breaking year has been eclipsed. Speed wagon shipments for the eight months' period are substantially in excess of speed wagon shipments for the entire calendar year in 1927. Incoming orders are at a satisfactory rate, according to officials and September shipments are expected to equal if not exceed those of the month just closed.

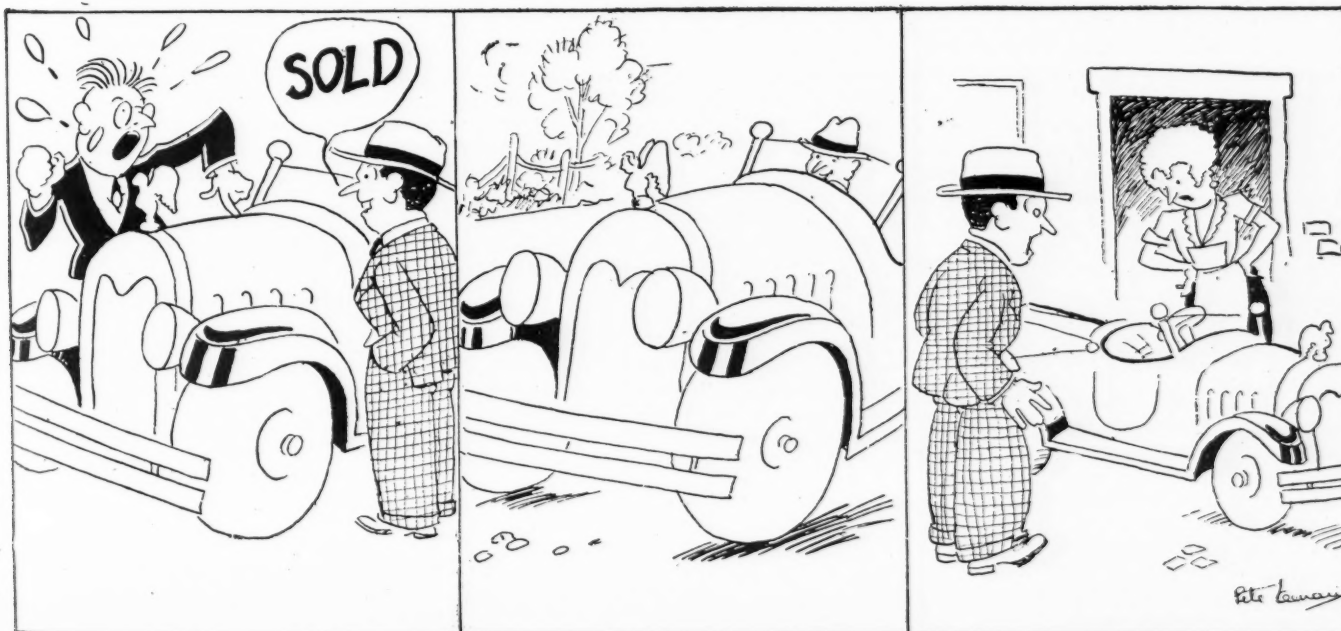
### Ramco Plants Combined

ST. LOUIS, Sept. 7—J. A. Ramsey, president, Ramsey Accessories Manufacturing Corp., announces that the Holland, Mich., plant has been moved here and combined with the original plant.

## Hay! Hay! Outa the Way



*This Oakland Six phaeton is having slow going behind a herd of oxen, which often hinder traffic on the roads around Port Elizabeth, South Africa*





### *They Carried the Message*

*THIS fleet of planes was used by Reo Motor Car Co. for its mammoth air mail shipment. There were 350,000 letters in the shipment and the postage was \$17,500*

## Safety Congress to Meet in N.Y.

NEW YORK, Sept. 12—Five hotels will be required to house the 110 meetings, 325 speakers and 6000 persons expected to attend the Seventeenth Annual Safety Congress to be held Oct. 1-5, inclusive. At this congress the question of how to check accidents on the streets and highways, in other public places, at home and throughout industry will be considered.

Accident preventionists from coast to coast will relate their experiences in successfully conserving lives; health authorities will dwell on the subject of looking after the welfare of industrial employees; fire prevention specialists will outline methods of curbing the terrible toll taken by flames and a public speaking instructor will teach the safety crusaders how to deliver addresses in the modern manner.

Public officials, whose job it is to safeguard people on the streets and highways, will give demonstrations of their methods. The latest mechanical safeguards and safety devices will be on exhibit. There will be breakfast meetings, luncheons, dinner sessions, evening gatherings, a mass meeting of members, a session for women and numerous entertainments.

Meetings will be held in the Hotels Pennsylvania, Waldorf-Astoria, McAlpin, Martinique and Commodore. There will be no charge for admission and non-members of the National Safety Council also will be welcome.

Alfred H. Swayne, vice-president of General Motors and vice-president of the National Automobile Chamber of Commerce, is chairman of the New York congress committee.

### Oakes Business Gains

DETROIT, Sept. 10—Oakes Products Corp. business is exceeding all expectations, it is announced by Claire L. Barnes, president.

"Sales during the month of June were 35 per cent ahead of May and our July business was 25 per cent ahead of June and double that of July, 1927," Mr. Barnes said. The company has increased its factory force about 70 per cent since April.

Oakes Products is engaged in the manufacture of a diversified line of automobile accessories, one or more of which are said to be used by nearly all manufacturers of motor cars and trucks.

### Pfleeger to Handle De Soto

HORNELL, N. Y., Sept. 10—Maple City Motors has been formed here to handle De Soto cars. L. L. Pfleeger, former White dealer, is president of the concern.

## More Workers Added at Pontiac

DETROIT, Sept. 12—Employment in Pontiac's four largest industrial plants, which this summer has reached a new high total, is a third higher than a year ago, a survey made today shows.

Figures, in some cases approximation, obtained today show that present employment in the plants of the Oakland Motor Car Co., General Motors Truck Corp., Wilson Foundry & Machine Co. and Fisher Body Corp. is about 33 per cent higher than a year ago. Employment reported today is 20,680 as compared with 15,387 a year ago.

### Story Joins C. Horn Co.

ST. LOUIS, Sept. 7—S. T. Story, formerly connected with the Weber Motor Car Co., will take full charge of sales of C. Horn Electric Automobile Co., Moon distributor.

### Discuss Olds Sales Plans

PORTLAND, ORE., Sept. 7—Fifty dealers in the distributing territory of Oregon and Washington answered the call of Edward E. Cohen, general manager of the Oldsmobile Co. of Oregon, and discussed sales and service plans for the coming year. Dealer contracts were renewed during the session.



## Chrysler Orders Shatter Record

53,417 for September Shipment; Output Behind Demand

DETROIT, Sept. 11—Orders for 53,417 cars for September shipment to Chrysler and Plymouth distributors and dealers were on hand the first of this month. J. W. Frazer, Chrysler and Plymouth sales manager, says this is by far the largest single month's order for cars the company has ever received. It follows immediately after the two months of greatest previous demand in its history.

Demand for the "75" and "65" and the Chrysler-Plymouth since the day of their announcement, July 5, has surpassed everything the company has ever known heretofore, reports Mr. Frazer. "In response to it," he said, "we have enlarged our productive facilities to the highest point yet attained without being able to fill the flood of orders that have come to us from every part of the United States, Canada and from overseas.

"The success of the new cars has been so tremendous that every Chrysler and Plymouth distributor and dealer continues today to be behind on orders. Many of our distributors have offered to take solid trainloads of cars. One came all the way to Detroit especially to request an entire day's output to permit him to fill his orders.

"We have been unable to do anything like this. The necessity for getting as many cars to everyone at the earliest possible moment meant splitting up each day's output into daily shipments to every possible distributing point in our utmost effort to keep every sales outlet on an equitable basis, and to keep cars moving everywhere as rapidly as we could."

### G.M.C. Enlarges Truck Line

DETROIT, Sept. 10—An improved and expanded line of G.M.C. trucks, ranging in capacity from 1½ to 4 tons, powered with the Buick engines, is announced by the General Motors Truck Co. With the increase in power due to changes in the Buick engines for 1929 and the recent development of a 1-ton Pontiac engined truck, the 1-ton Buick engined truck has been increased in capacity to enable the carrying of 1½-ton loads.

The various models are designated as follows: The T-30 is of 1½-ton capacity with chassis prices of from \$1,395 to \$1,485. The 2-ton truck, with prices from \$1,685 to \$1,760 for the various wheelbases, is called the model T-42 and is a development of the T-40. In addition there are now the T-60 and T-80, of 3 and 4 ton capacity, respectively, which are developments from the smaller trucks and replace the K-54, K-56 and K-72.

## Jest—a Bit Cynical

By Sherman Swift

**I**N every retail business there are certain factors that act as a dragging brake on the success of the enterprise. The grocer worries about the careless weighing methods of careless clerks, the clothing merchant is always confronted with loss consequent on the premature advent of new styles which lower the profits on his surplus stock of former models and not even the bootlegger is immune, what with hijackers, politicians and a shrinking market caused by the promiscuous killing off of his best customers.

The car dealer has always had his share of worries, but in many instances his greatest difficulty has been to get salesmen who compared favorably with those in other lines. This condition, admitted by nearly everyone, has perhaps contributed more to the actual job of making a profit from selling cars than any other one thing and those who have successfully solved their selling problem know that by so doing they have automatically solved the bulk of all their problems.

It is a fact that the situation is clearing and that a better type of man is getting into the selling end of the business, for which we should all give thanks. However, there are a few of the objectionable class still making a precarious living by means of the drawing accounts they can wheedle out of credulous dealers and a recent conversation between four salesmen overheard by the writer as he sat at lunch is offered as evidence that this is so.

"This here automobile game ain't what it uster be," said salesman number one as he pushed his hat on to the side of his head and took a hammerlock on his knife.

"I bet I be'n in an' out of it all of a half-dozen times since the war. Soon as the old drawin' account stops this time it's me for the shoe store. It's hard work, but yuh get your so much per, even though it ain't as much as it might be. And it's your own money. I mean yuh don't owe it to no boss. Am I right?"

The three nodded.

"Trouble with this game is you don't never get a whole commission. Got to split with the guy that give you the tip. Whether you make it or not. I don't split 'less I can't help myself."

"Me neither," said the second salesman, sympathetically. "How many automobiles in this town are sold by salesmen? I mean actually sold. They're all sold on tips and most of the time you got to take a used car in at a price that don't leave no profit. And then the feller that gives you the tip wants to knock you for a loop when you can't give him his share. And you usually owe all the commission to the boss anyway.

"I'll get out of it this time and I'll stay out—if I got the sense that Gawd give a duck. 'Bout fall I'll get me a good bell-hop job in Florida. You can always eat anyway and usually you get real jack.

"The dollar you get in a hotel or a mill, or I don't care if it's a sody fountain, is money. And it's all yours, too. The dollar you might get selling automobiles ain't never but a half-dollar. I mean you either got to split with some chauffeur or somebody. Or you're riding by Bill's place with a prospect and it's 'come in an' have a drink'—and there's another fifty cents gone. It's a cigar to this guy and a soda to another until by the time Saturday comes you're ready to rob a poor-box to get your laundry out of the Chink's."

"Best way to sell automobiles," sagely opined salesman number three, "is to do as I do. Sell 'em for anybody and everybody. If the prospect likes one kind I sell it to him. If he wants another make I sell that. You get used just as good and sometimes you can get a drawin' account from three or four dealers at once.

"Average dealers won't give you a break. One man gets everything an' the other nothing. Look at my boss. He's paying \$75 a week to Bill Thompson. Winter and summer, rain or shine, Bill collects the old 75 per and expenses. An' Bill ain't any better salesman than we are, is he?" he asked truculently.

"He's nothing but a plugger," sneered salesman number one. "He's no salesman as I understand the meanin' of the word. But of course he's gettin' the breaks. Breaks is all you need. We got a wholesale man down to our agency has sold 1500 cars since the first of the year. But of course he got the breaks. He ain't got one thing we fellows haven't got."

"You fellows are wrong about the business being bad, I think," said salesman number four, scraping the sugar from the bottom of his coffee-cup. "I've thought this thing over pretty careful and the business is good. It's the bosses that are the trouble. Same as Harry here tells about his boss payin' Thompson \$75 a week and expenses while Harry only gets a \$25 drawing account. Is that fair? It is not. Trouble is the way a salesman gets used."

And to this statement the other three gave hearty assent.



## Service Men to Expand Activities

New York Association Plans Active 1928-1929 Season

NEW YORK, Sept. 10—Plans for the 1928-1929 season of the Automotive Service Association of New York provide for expansion and greatly increased activities. This is the oldest and the largest organization of automotive service executives in the world.

The monthly meetings, which start Sept. 13, will be held in the ballroom of the Park Central Hotel, which provides the additional room necessitated by the rapid growth of the A. S. A.

The speaker at this initial meeting of the new season will be David Beecroft, veteran automobile editor and vice-president of Chilton Class Journal Co., who has just completed a six-month intensive investigation and study of automobile maintenance. Charles B. Warren, president of the Automobile Merchants Association, will also speak.

The officers and directors of the Automotive Service Association are: John F. Gfrorer, Hudson Motor Car Co., president; Oscar A. Eskuche, Warren-Nash Motor Corp.; A. G. W. Brown, Fifth Avenue Coach Co.; John M. Grant, General Motors Truck Co., and John F. Creamer, Wheels, Inc., vice-presidents; Charles Michaels, Michaels & Mourre, Inc., secretary; J. Howard Pile, Automotive Electric Service Corp., treasurer; R. J. Adams, General Motors Export Co.; Harry Adkins, Brewster-Rolls Royce; A. C. Bergmann, Bumpers, Inc.; Charles J. G. Doherty, Municipal Asphalt Plant; William G. Gow, Mallon Motor Car Co., and Harry Jeffers, C. H. Jennings Corp., directors.

### Rail Service for Cars

PORTLAND, ORE., Sept. 7—The Southern Pacific Railroad has developed a novel service between Pacific Northwest points and San Francisco for motorists. A new type of railroad car has been developed to carry automobiles between the two points. It has end doors and steel runways. Automobiles thus become baggage. As the motorists detrain, they enter their cars and drive away.

### 72 Car Clubbers Meet

LOUISVILLE, KY., Sept. 7—About 200 members of the Chevrolet and Two-Car Clubs, of the Louisville, Ky., and Knoxville, Tenn., districts, including salesmen from about 150 towns and cities, attended an all-day outing given by the Chevrolet Motor Co., at Rose Island. A banquet was served at 5 o'clock in the evening, presided over by A. F. Young, regional sales manager, who was the principal speaker.

Heretofore the club membership was open to those selling 72 or more cars



### Traveling Home

*HERE is Sinclair Lewis, inquiring the way out of Oxford, England. He and his wife, the former Dorothy Thompson, are on a honeymoon tour of Britain. The large van being towed is sumptuously fitted out as their living quarters during stops. The pair planned a carefree tour, rolling languorously or briskly along the elegant highways and picturesque by-ways of Britain in their Chrysler*

in a 12-month period, or an average of six per month. At the meeting it was decided to raise the ante to 100 cars per year.

### De Palma Wins at Toronto

TORONTO, ONT., Sept. 11—Ralph De Palma, veteran auto race driver, carried off the Golden Jubilee Sweepstakes in the automobile race meet held at the Canadian national exhibition and lowered the exhibition record. The meet was the first ever held in Canada under international contest board rules.

Doug Wallace, 10-mile dirt track champion of the Southern states, was narrowly nosed out of second place by Al Aspen, who finished almost a lap behind De Palma.

De Palma's record times were 5:18 flat for the five-mile sweepstakes final and 3:09 3/5 for the three-mile rolling start event.

### Bohn Corp. Dividend

Bohn Aluminum & Brass Corp. has declared a dividend of 75 cents a share, thus placing the stock on a regular annual \$3 basis. The previous rate was \$1.50 per year. The dividend is payable Oct. 1 to stockholders of record Sept. 15. Following the directors' meeting, P. A. Markey, treasurer, said: "We are in excellent financial shape and the outlook for the balance of the third quarter continues good. Two of our plants are working day and night and we expect a 10 per cent pick-up in business in September over July and August."

### Pierce-Arrow Sales Gain

BUFFALO, N. Y., Sept. 8—Pierce-Arrow's new aggressive policy of sales expansion, reflected in its recent drastic reductions which have brought Pierce-Arrow prices to the lowest in history, has resulted in the greatest volume of sales of any August in the company's experience. Shipments for August are nearly double, and the company has approximately three times as many unfilled orders on its books as it had a year ago.

Sales of the new Series 81 line of cars, now priced at \$2,475 and upward, have been the biggest factor in Pierce-Arrow's success march, directly resulting in a stepping up of production at the Pierce-Arrow factory at Buffalo, according to officials of the company.

### Chadwick Takes on Autocar

MILWAUKEE, Sept. 12—Chadwick Bros. Co., 2450 Clybourn St., has been appointed Autocar distributor in Milwaukee, Ozaukee, Dodge, Waukesha, Fond du Lac, Sheboygan, Jefferson and Dane counties, Wis. Members of the concern have long been associated with the distribution of tractors and industrial and construction equipment in the Milwaukee region.

### Wisconsin Parts Expands

OSHKOSH, WIS., Sept. 11—Capacity of the plant of Wisconsin Parts Co., manufacturer of axles, is being increased materially by new construction now under way.

## Oklahoma Family Has Car for Each

Thoroughly Motorized Clan  
Has Purchased Fifty  
Studebakers

What is believed to be the most thoroughly motorized family in the United States has been discovered in Avant, Okla. The Studebaker dealer in this territory reports that the Bradshaw family of Avant has bought nearly 50 Studebaker cars in the past 10 years. Every member of the family has an automobile.

### New Lansing P. & C. Plant

LANSING, Sept. 8—Lansing Paint and Color Co. has just completed the erection of a new plant for the manufacture of nitro-cellulose lacquer, according to an announcement made by William S. Hatten, general manager.

### Marmon Increase

DETROIT, Sept. 10—A. M. Colville, general manager of the Marmon-Detroit Co., announced that the Marmon registrations in Detroit for July brought the total for the first seven months of 1928 to 325, a 100 per cent increase over the same period of 1927.

### Browne With McGonagle

MINNEAPOLIS, MINN., Sept. 10—Lewis M. Browne, manager of the St. Paul, Minn., division of D. A. Odell Motor Car Co., Pierce-Arrow representative for four years, has become general manager of the McGonagle Motor Sales Co., Minneapolis, which sells the Lincoln in Minneapolis territory.

### Ford Gains in Ohio

COLUMBUS, OHIO, Sept. 11—After trailing many other makes of cars in number of sales for a year and a half, Fords came to the fore during the month of August and a total of 308 Fords were reported sold in Franklin County during the month as compared with 22 in August, 1927.

### Chevrolet Dealers Rate High

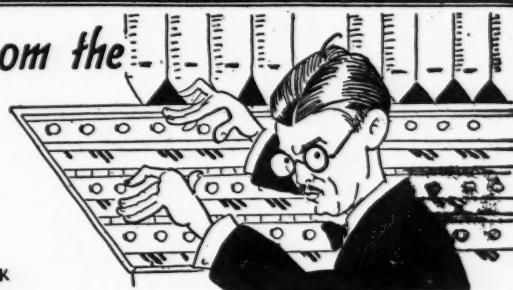
ELLENDALE, N. D., Sept. 11—The firm of Kendall & Hamar is credited with having sold 83.8 per cent of the cars in this territory in the price class of the Chevrolet, during the first six months of 1928, according to data compiled by the Fargo branch of the Chevrolet company, and announced here last week.

### Moon Dealer Reorganizes Sales Force

ST. LOUIS, Sept. 11—The C. Horn Electric Automobile Co., 4601 Delmar Ave., Moon-Aerotype dealer, is taking steps toward making its showrooms more attractive as well as strengthening the sales force.

## Tunes From the House Organs

GEORGE T. HOOK  
AT THE CONSOLE



SINCE manpower is of such great importance in the industry we're going to devote this week's program to selections attuned to the ears of salesmen.

Much has been said about the "new competition," but not enough. A contribution on the editorial page of *The Goodyear News* relates how a tire dealer, taking advantage of "new competition" methods, built an \$80,000 business out of a cubby-hole. There's a healthy thought for automobile salesmen in the contribution, which follows:

*"The time has most certainly passed when the dealer can stay in his place of business and expect trade to come to him.*

*"Just because an automobile owner's tires are not completely worn out is no reason he is not a tire prospect. Furthermore, just because a car owner says 'No' the first time is no reason he cannot be sold by repeated efforts. In this respect, we can take a good lesson from the salesman who calls on us to sell a vacuum cleaner, electric refrigerator, insurance policy or something of that sort. They do not stop on the first turn-down.*

*"I have in mind a dealer who about a year ago had an establishment little more than a wiener stand, doing a very small amount of tire business. This year this dealer will do around \$80,000 and the progress has been made principally through personally, aggressively soliciting car owners. The two partners of this firm have buried their pride and have gone to work. They start at the top of an office building, for instance, and work down. They are calling on car owners at their homes or offices in an effort to sell them tires."*

It's a matter of ringing doorbells, of course. And the reason more doorbells aren't being rung by automobile salesmen is because of that intangible affliction known as pride. It may be true that the only thing between many automobile salesmen and success is a doorbell. And the doorbell waits invitingly to be pushed!

*The girlpower of the industry will probably want to store this one for future use. We got it from Horst's Profits:*

*"Couldn't you let that skirt down a little, Mary Louise? It's only an inch below your garters."*

*"For Heaven's sake, mother! Do you want me to look like a monk?"*

Remember this is your sales work: One half is a curse without the other half. So says the *Chandler Times* to salesmen, and argues the point thus:

Your will is law any time you set it to being that. These sessions that carry you half-way to getting what you started for will materialize in finished jobs again and again, if you set your will to bringing them to a fruitful conclusion. Be an obstinate fool, a pest, a nuisance—anything rather than a half-way man.

Use this half-way thought when you cross swords with the prospect who tells you that he has looked into the type of proposition you offer and is not interested. Carry it home to him that if he says that, it must be because he has gone into it only half-way.

Have the facts that are necessary to go all the way. Have the determination to go all the way, and you'll go twice as far as most men, because most men are cursed with the half-way habit.

*And we'll close with these observations on progress from the Richards-Wilcox Door-Ways: "Some people (and some companies) hang onto what they have already accomplished with such self-satisfied oblivion of their surrounding opportunities and obligations, that they lose not only those opportunities but also they lose what they already possess—like an athlete in a race who, after gaining the lead in the field, concentrates his attention on the beautiful scenery about him, instead of on the goal which frantically beckons him till the race is finished."*

"The world is changing rapidly—and old methods do not always coincide with new conditions. The person or company which stands still loses the race for supremacy—and loses it quickly in these days of intensive progress.

"The secret of successful, enjoyable life is this (with individuals or with companies): Constant progress—endeavoring to sift out the fundamental requirements of the changing conditions, and concentrating its efforts on them—casting aside the fantastic flashes of ephemeral conception which cannot lead to sound, permanent progress—following the suggestion of the immortal Pope:

*"Be not the first by whom the new are tried, nor yet the last to lay the old aside."*



# In Step With the Spirit of the Times

## *Automobile Trade Journal and Motor Age are Combining*

**A**UTOMOBILE TRADE JOURNAL, the oldest and leading monthly publication in the industry, and *Motor Age*, the leading weekly, are being joined in one strong, outstanding publication worthy of America's leading industry. Concentration on this one publication of all of the money, effort and initiative previously resulting in two outstanding publications will make possible a new leadership unique in character and powerful in performance.

Editorially the new publication will render an unrivaled service to automotive retailers. It will be manned by the largest and most experienced staff ever concentrated on a single monthly automobile trade publication. It will be full of practical, useful ideas and information from cover to cover. The material will be presented in such a way as to make possible maximum use with minimum effort on the part of the reader. Its pages will be bright, attractive and readable, but also packed with important material concerning trade facts, methods and events. Backed by the full facilities of the world's largest automotive publishing house, this new publication is expected to set new standards in business paper editing.

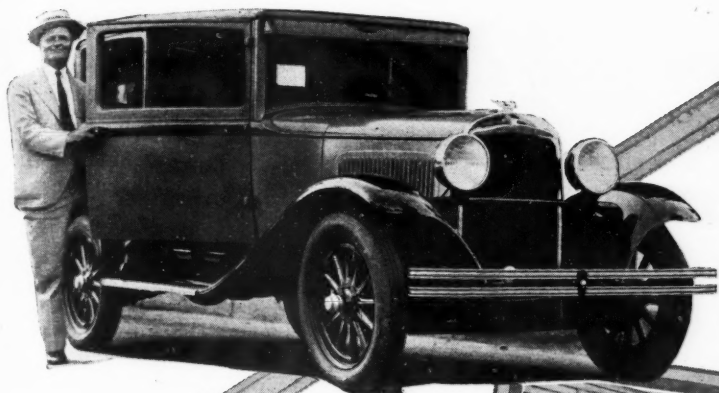
The new *Automobile Trade Journal and Motor Age* monthly will have more than 60,000 paid trade circulation. We question if there is any trade journal in the United States, or elsewhere, that can match it in quantity and quality of circulation. Sixty thousand trade units represent a buying power of over 85% of America's largest industry, and to be able to cover all buying sources in this trade to within 15% of the total is an accomplishment well worth while.

Throughout the automotive industry, mergers and consolidations have been making for greater marketing efficiency, for better products and for greater dollar-for-dollar values. This combination of the two leading publications of the industry is distinctly in step with the spirit of the times.

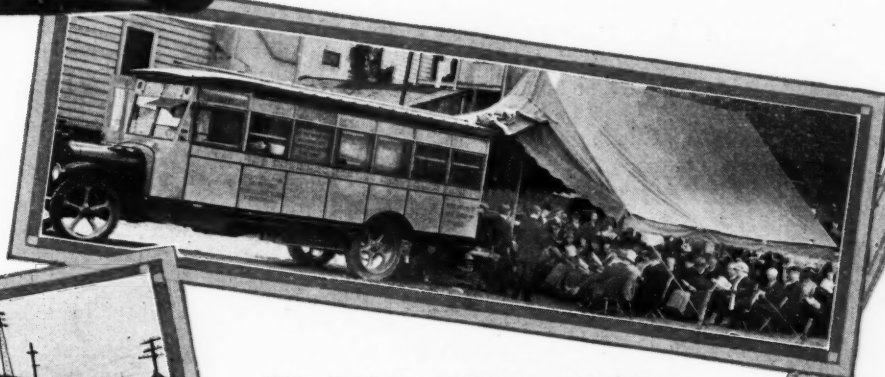
  
President,  
Chilton Class Journal Co.



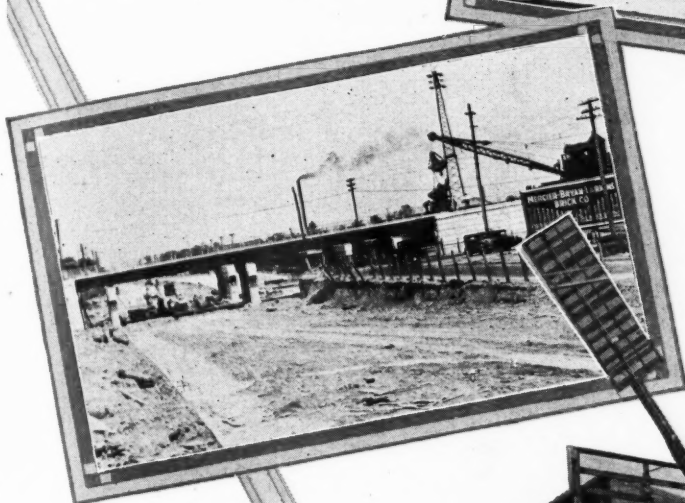
# Seen by the Tourist



G. D. Wright, Fort Worth, Texas, said to be the first man to sell automobiles on time



This chapel car supplies its own pulpit by backing into a tent which is carried on the car from town to town. The car is fitted up as a traveling home. The tent is designed to shelter about a hundred people



Careful analysis brought to light that traffic tie-ups are costly enough to warrant the building of such a structure as the \$1,000,000 elevated street intersection (above) at Michigan Avenue and Southfield Road, Detroit



A most unusual gasoline station is the "Old Mill," at Topeka, Kan. The wooden building is an actual reproduction of a Dutch windmill. In keeping with the "atmosphere," the attendant is dressed as an old-time Hollander

# Service Begins

*That, According to a Louisville Dealer, is  
mences, in That It Reduces Comebacks and  
Free to Attend to Profitable Tasks. He  
Eight Hours After Unloading Them  
Thorough*

*By*  
A. W.  
Williams

*George T. Browder, president and general manager of Browder & Hoskins Co., Chevrolet dealer, of Louisville, Ky.*

**G**EORGE T. BROWDER, of the firm of Browder & Hoskins, Chevrolet dealer in Louisville, Ky., as president and general manager of that company, spends a great deal of time in developing figures, which give him the pulse of the business, and he has worked out a good many methods for improving service. As a result of figures he has been able to develop charts showing just what his service department is doing.

In 1927 the company serviced 22,937 cars; sold 1229 new cars, as against a 1000-car contract; turned the used car stock 25 times, and received a 1500-car contract for 1928.

Considering the large number of Chevrolet cars in operation and the many customers that the company has today, and whose cars are being serviced by the organization, it has been necessary to speed up service.

Mr. Browder claims that the first place to improve service is in servicing new cars as they are unloaded from the railroad cars, and before they go into new stock. As the cars are unloaded at the railroad, they are towed to the company establishment. They are placed in a service yard at the rear and run in for a period of eight hours and adjusted. They are then gone over, tightened up, brakes adjusted and completely serviced and run into the new car stock. When a customer wishes a car it is only a matter of a short time to wash and polish it and make delivery.

By following this method the company does not have to rush adjustments in order to give delivery, and as a result cars are delivered to customers as fit as hands

*Right: The service yard of the Browder & Hoskins Co., where new cars are run in for eight hours after being received from the factory. Service department employees are shown in group formation*

can make them. In this way delivery of new cars does not interfere with regular routine of the service department.

Again things are not overlooked in a rush of quick delivery, and by being properly serviced in advance, the number of come-backs for minor adjustments is greatly reduced, which again relieves the service department considerably and makes it possible for this department to follow regular work without so many interruptions.

In proving this theory Mr. Browder frequently takes new cars that have been serviced and keeps records





# Before *the* Sale

*Where Service Improvement Comes  
Leaves the Service Department  
Runs in His New Cars for  
and Then Gives Them a  
Adjustment*

on them; and again takes cars that were not serviced carefully, and keeps records, and has brought out an interesting comparison. The last car he used for his personal use was one that had been carefully serviced, and in 2200 miles it came in for service just once, and that was an adjustment on the brakes. The previous car was one that was not run in and properly serviced, and in 2200 miles it was in just 19 times for a variety of minor adjustments before it was right.

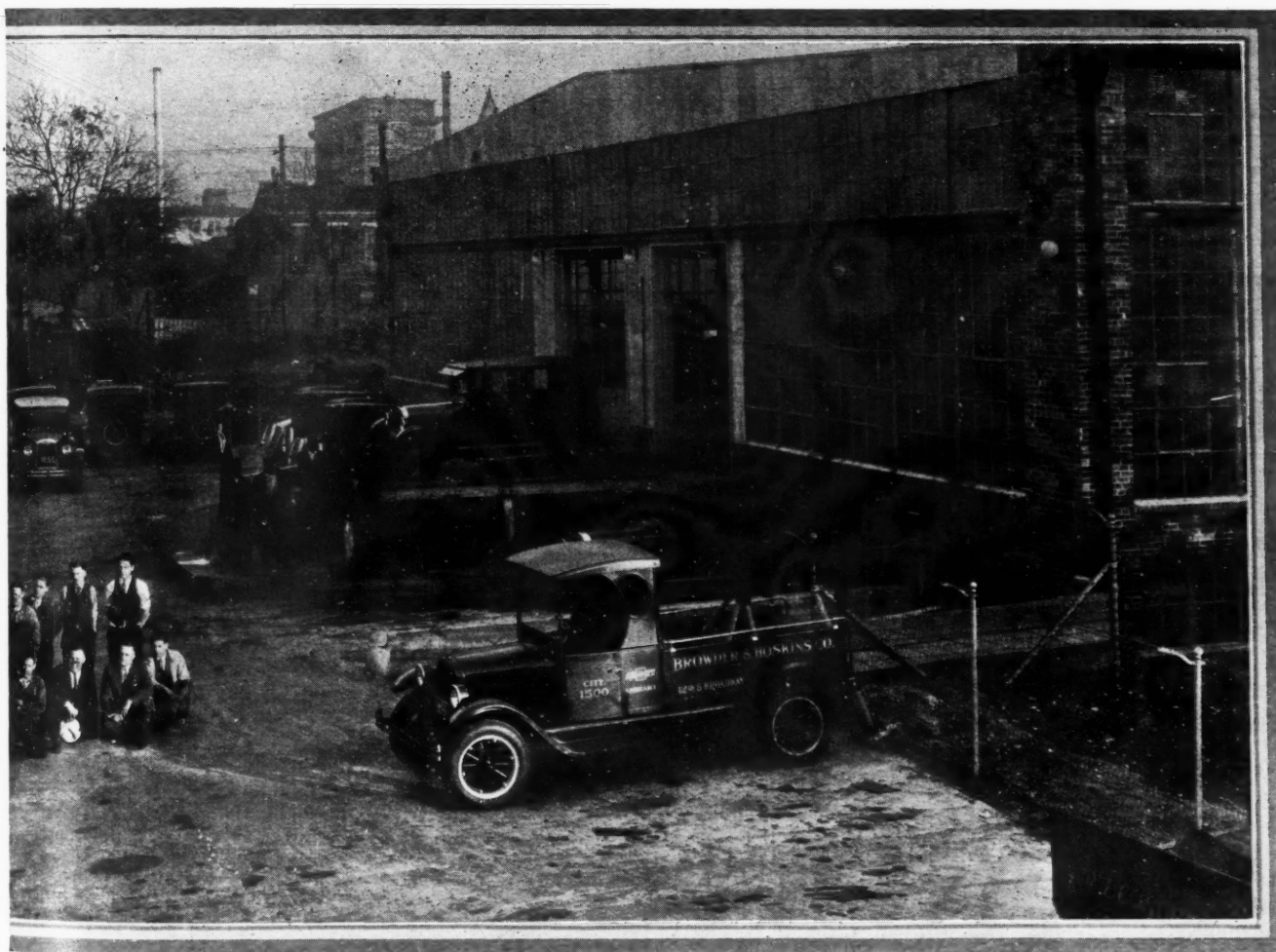
Stop and consider what 19 service trips in 2200 miles would mean in interruptions for the service

be constantly crowded with a long string of cars, waiting for their adjustments. It would mean that owners were dissatisfied with the annoyance of constant trips to the establishment. On the other hand if the new owner has one service trip in 2200 miles, he feels like boosting the car, which helps sales.

Mr. Browder remarked that whereas every service operation is handled on an established price basis, as laid out by the factory, it is possible to speed up service and give better service through use of modern machinery and equipment, and the best type of skilled mechanics. One garage without good mechanics and labor-saving devices can lose money on an operation, that another equipped service department can make money on.

Mr. Browder claims that one of the chief needs of a service department is good light and plenty of it. In this respect his establishment is unusual. Although it was a dark morning and the rain was falling sharply when the writer visited it, not a light was burning on the service floor, other than those used under cars.

Mr. Browder also commented on the fact that the used car department was one to which he had given



department. If most new car owners were having similar troubles it would mean that the service department and the service turning yard at the rear, would

a great deal of time and thought, as it represents the dynamo of any large agency today, in that it to a

(Turn to page 33, please)

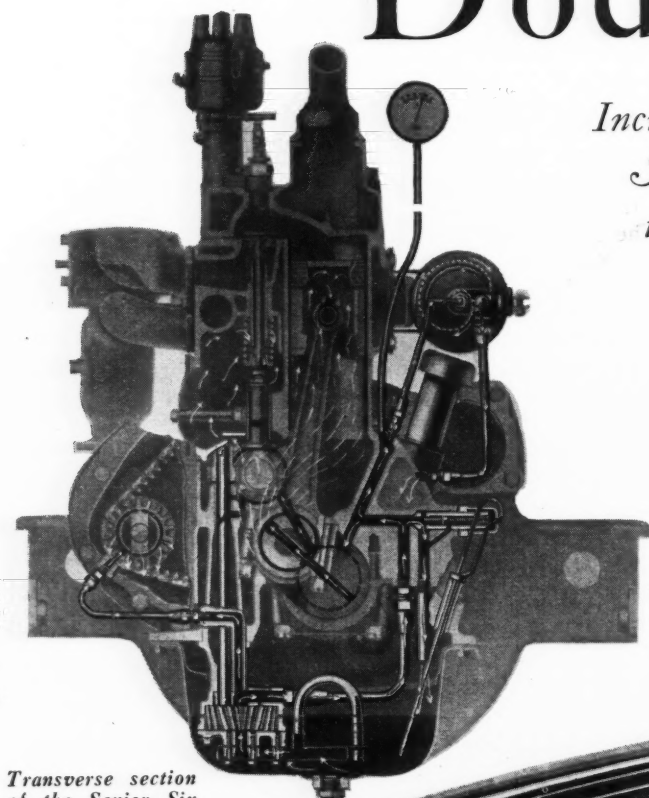


# Dodge Alters

*Increased Compression Ratio and Improved Manifold Make for Greater Power in the New Cars. Wheelbase Now 120 in. Three Body Models Added*

The new Senior line comprises six body types, ranging in price from \$1,575 to \$1,845, representing an increase of approximately \$20 to \$85 for the body models, although direct comparisons cannot be made between some of the body types. Following is a list of the models and prices:

*Bottom: Front view of the new Dodge Senior which gives an idea of the considerable departure from the former body lines. Note the Dodge Brothers initials, which did not appear on the former model*

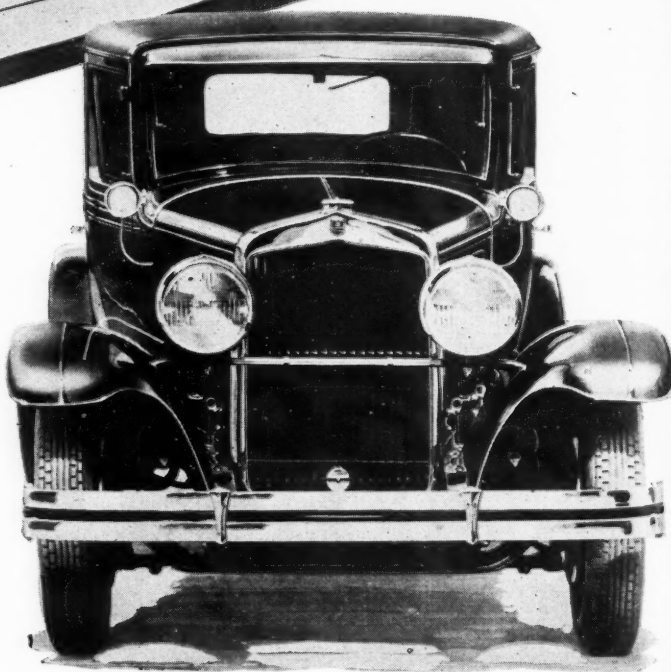
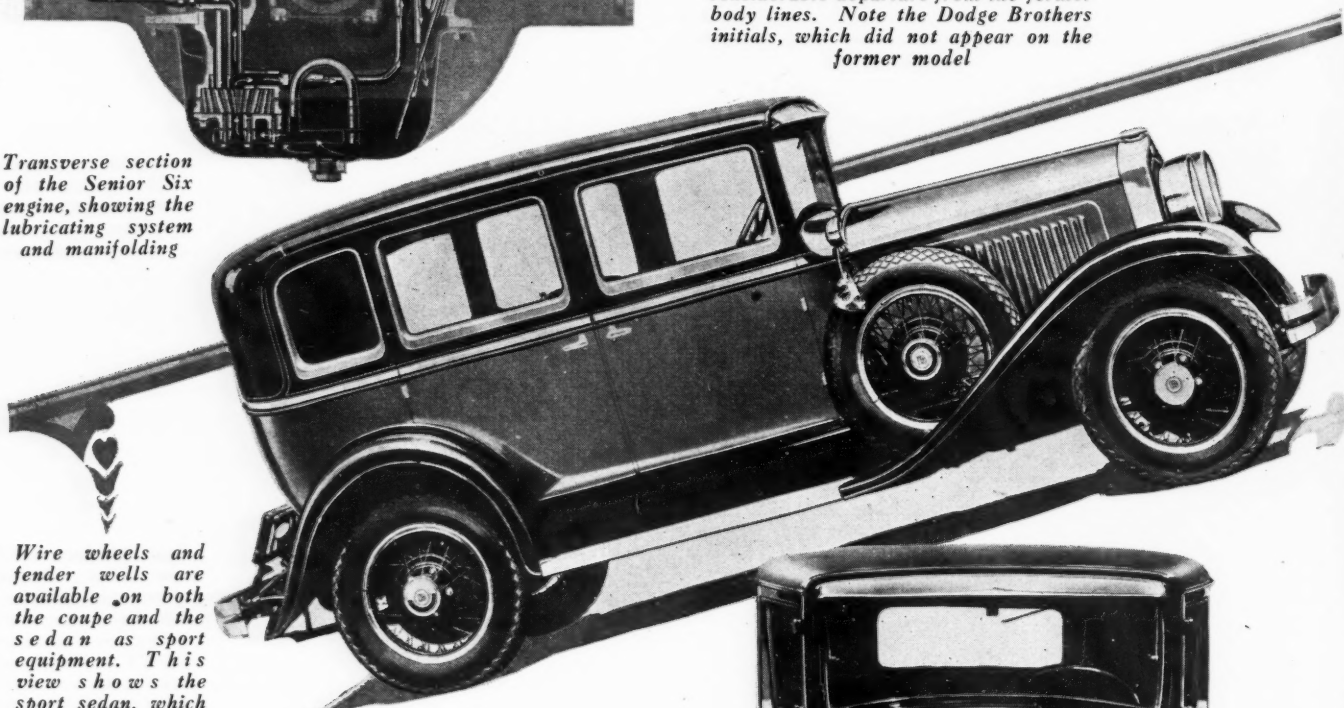


*Transverse section of the Senior Six engine, showing the lubricating system and manifold*

*Wire wheels and fender wells are available on both the coupe and the sedan as sport equipment. This view shows the sport sedan, which lists at \$1,795. Six tires and trunk rack are standard*

**D**ISTINCTIVE, new, exterior body lines, lower in appearance, increased wheelbase, greater roominess, increased riding comfort, greater power and a number of chassis and body refinements characterize the new Senior line announced this week by Dodge Brothers, Inc.

The announcement of the new line and recently published refinements in the Dodge Victory line serve as a good denial of the rumor that the taking over by the Chrysler Corp. of Dodge Brothers would result in discontinuance of some of the Dodge lines of cars. Minor body refinements are also apparent in the Standard Six, although no official announcement to this effect has been made.

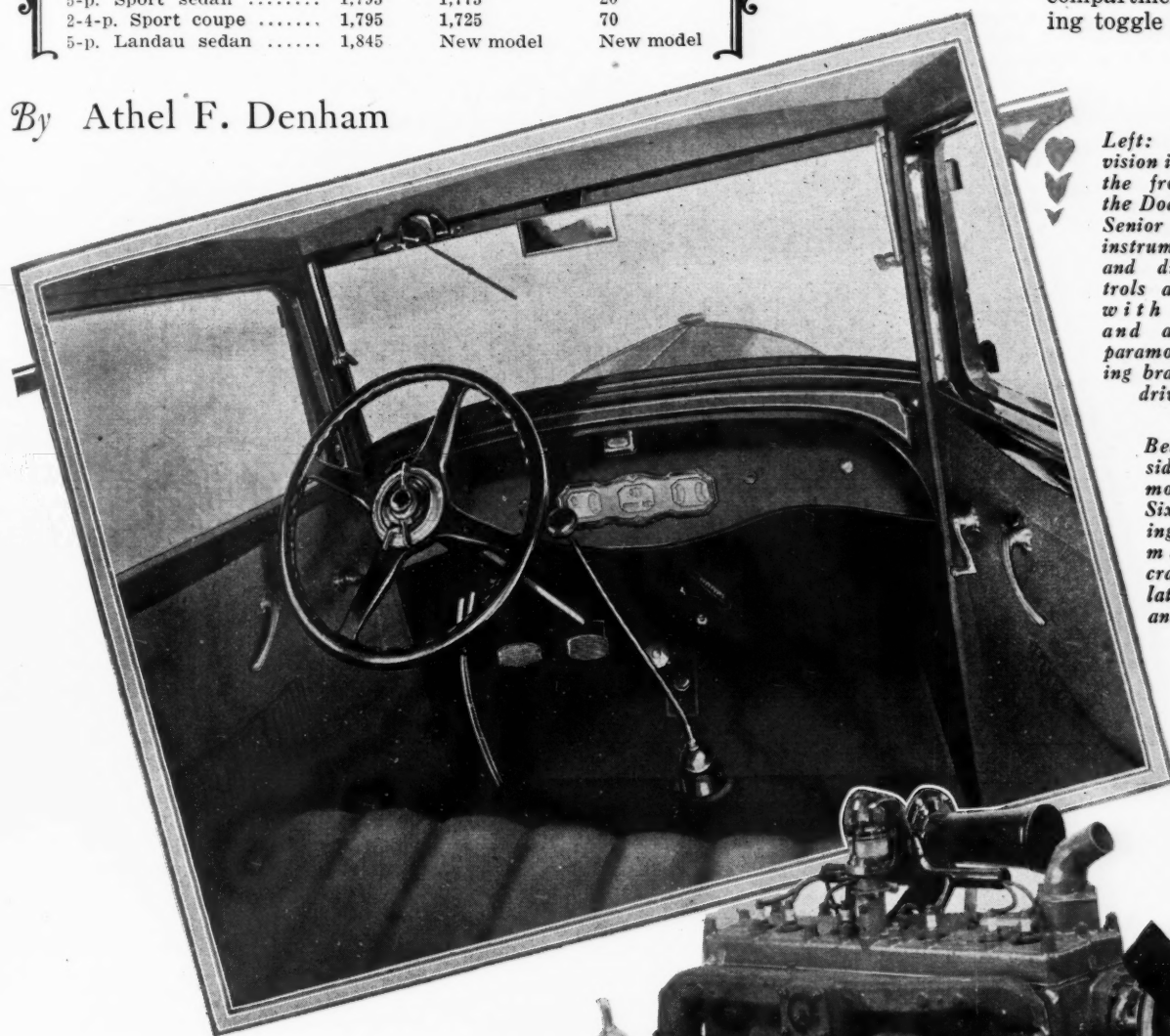


# Body Lines of Senior 6

Model	New Price	Old Price	Increase
2-d. Victoria bro'm.....	\$1,575	New model	New model
5-p. Sedan .....	1,675	\$1,595	\$85
2-4-p. Coupe .....	1,675	New model	New model
5-p. Sport sedan .....	1,795	1,775	20
2-4-p. Sport coupe .....	1,795	1,725	70
5-p. Landau sedan .....	1,845	New model	New model

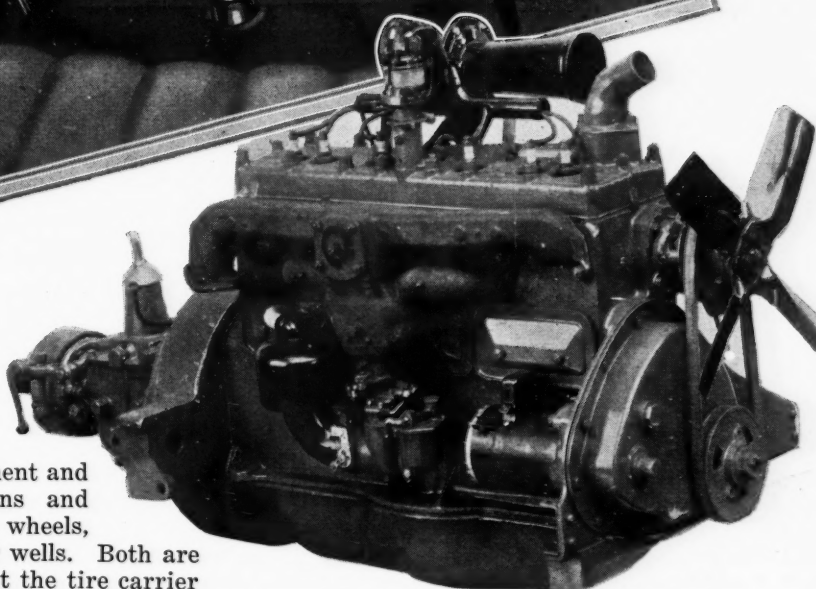
handles on the backs of the front seats of the five-passenger models, in addition to those on the side of the rear compartment, supplanting toggle grips. Sedan

By Athel F. Denham



*Left: Unusual vision is afforded in the front seat of the Dodge Brothers Senior Six, and the instrument board and driver's controls are arranged with convenience and appearance paramount. Parking brake is at the driver's left*

*Below: Right side view of the modified Senior Six engine showing the new manifold, crankcase ventilating system and Stromberg carburetor*



The new victoria brougham is a five-passenger, two-door model with adjustable driver's seat. It is supplied with wood wheels, as are the sedan and coupe. The latter has a crank-operated rear window for communication with the rear compartment and for better ventilation. Sport sedans and coupes are furnished with six wire wheels, six tires, and spares carried in fender wells. Both are also fitted with trunk racks to supplant the tire carrier at the rear.

The landau sedan, another new model in the line, has a fabric rear top quarter, with conventional landau irons. It also is equipped with six wire wheels and tires, fender wells and trunk rack. The rear seat of this model is fitted with a disappearing folding type armrest for use when only two passengers occupy the rear seat.

Other features of the new body models include grab

doors are fitted with pockets in panel inserts. To the dash is attached a fabric composition panel for noise and heat insulation from the engine compartment. The emergency handle is at the left of the driver and curved outward to prevent it from obstructing the movement of the driver's left foot. Sport models have leather inserts in the front compartment carpet at points where

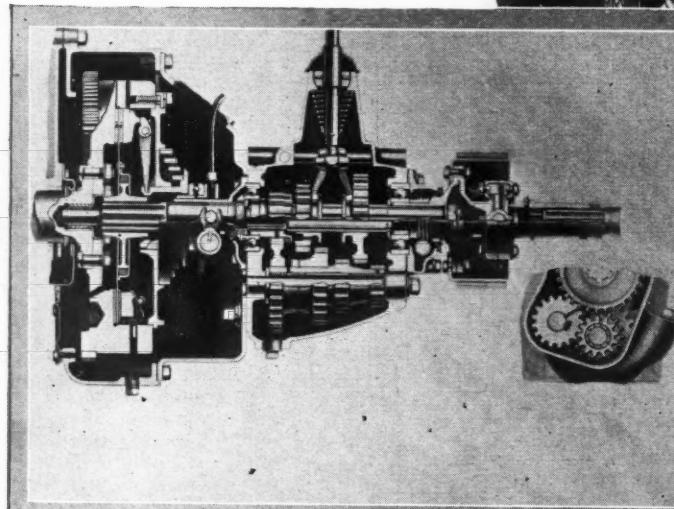
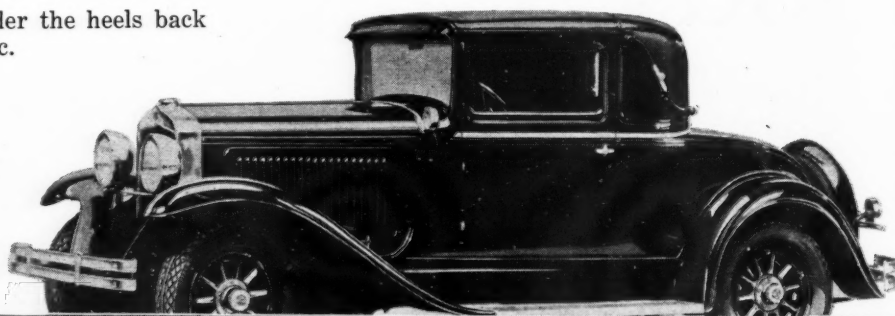


## DODGE ALTERS BODY LINES OF SENIOR 6

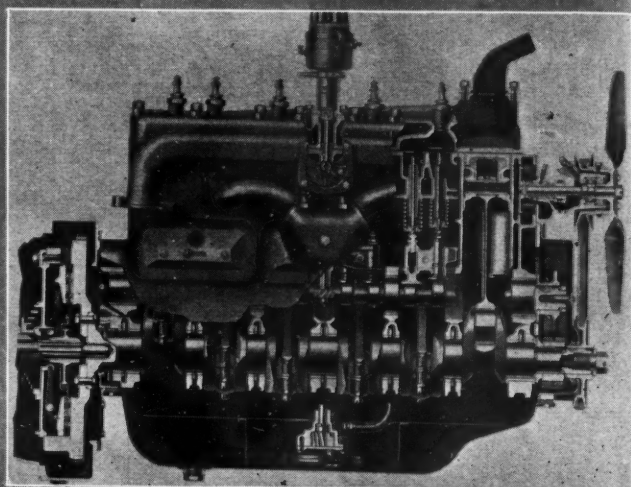
wear is normally the greatest, as under the heels back of the pedals, around the controls, etc.

A walnut steering wheel is employed. The windshield is of the

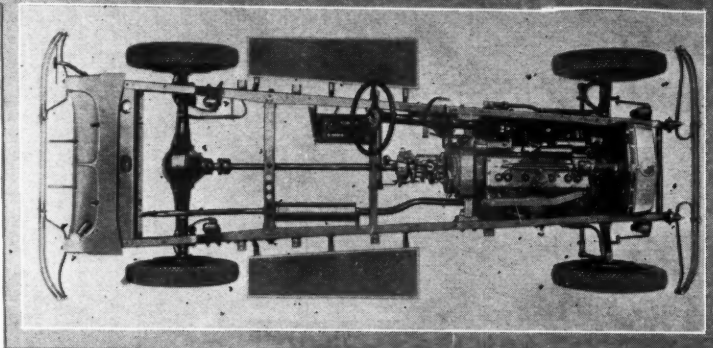
*Right: The coupe on the new Senior line is one of its most attractive models. It has a rumble seat, crank-operated rear window and dome light, and lists at \$1,675*



*Sectional view of the clutch and transmission assembly. Note the rubber cushioning the clutch drive*



*Sectional view of the Senior Six engine. Note the location of the heater valve and large radii for the inlet Y-shaped manifold*



*Left: Plan view of the chassis of the Dodge Senior Six*

swinging type, with internally mounted vacuum wiper fitted with hand control. The coupe has a dome light as also have the sedan models. The latter have rear quarter lights in the sport editions.

Externally the lines are radically different from those of the former Dodge line. The radiator shell has a slight peak at the top, and the entire front is covered by the false bottom and thermostatically operated radiator shutters, the latter extending all the way to the top of the core. An easy-on flush type filler cap with central ribbing finishes off the shell, the rib lining up with the hood piano hinge.

All exterior bright metal hardware is chrome-plated, including bumpers, radiator shell, lamp rims, cowl trim molding, outside door handles, spare wheel clamps, on the sport models, etc. General body lines, as will be noted from the accompanying characteristic illustrations, follow closely what might be called the 1929 motif of body design.

Mechanically, the most marked change is in the increased power of the new cars. This has been obtained by an increase in compression ratio from 5.26:1 to 5.55:1, and through improved manifolding. Probably most of it is due to the new design inlet mani-

fold, which is of Y shape, with a very large radius joining the short vertical riser to the horizontal portion. By this means, and the extending downward into the riser of the outer radius of the manifold, in the form of a V, good equalization of pressure is obtained and distribution is facilitated. Moreover, the manifold is of the two-port type, with ports so arranged that all inlet valves are equidistant from the carburetor. The result is good equalization of power.

Another feature of the manifolding, which is well worthy of mention, is the new design of the intake heater valve. The exhaust manifold proper does not jacket the inlet manifold, but the latter has a jacket which bolts to the bottom of the exhaust manifold. The butterfly valve is located in the bottom of the exhaust manifold in such a manner that in the completely off position all gases pass directly out through the exhaust pipe without passing around the inlet manifold. With the butterfly fully open, all exhaust from the three front cylinders has to pass through the jacket. This alone should provide rapid heating, but in addition fins are cast on the inlet riser inside the jacket to expedite the heating effect. It is recommended that for normal operation the heater be left in the partially on position.

*(Turn to page 38, please)*



# Chicago Nash Has Test Track On Roof

*Modern Building Includes Many Unusual Features of Design and Operation*

ON a concrete roof track, high above the roar of traffic, in Chicago's south parks boulevard system, a score of shiny new cars were recently put through their paces to mark the informal opening of the \$1,000,000 automobile depot that H. T. Hollingshead has just completed to house sales and service headquarters for his Chicago Nash Co.

The new building, which has risen in record time on the northwest corner of Prairie Ave. and Twenty-fourth St., midway between Michigan Ave. and South Parkway and overlooking the old World's Fair site, is the first of its type in Chicago. It includes ultra-modern construction and operation features unusual in structures of the kind.

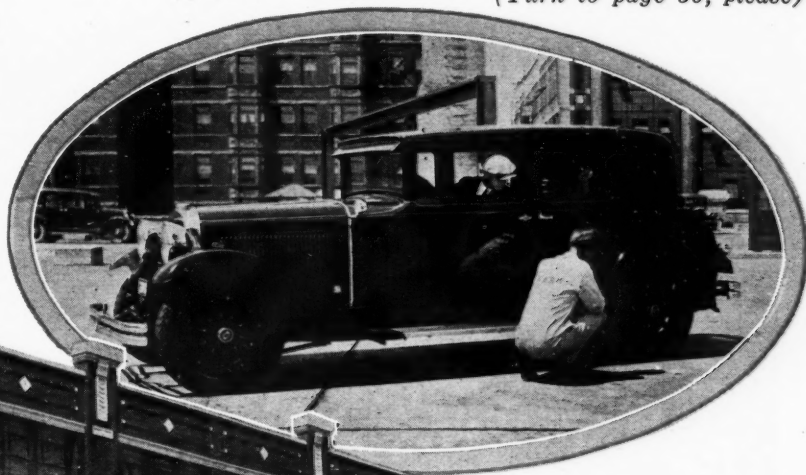
The original unit, now completed, is a three-story structure of steel and concrete with pressed brick and terra cotta front. Provision has been made to add an additional story without disturbing service operations. The building provides a total of 210,000 square feet of floor and roof space, every inch of which is given natural light by means of a system of steel sash windows, pivoting from the center to swing outward, and perfect ventilation through a mechanical ventilation system.

A complete concrete testing track has been laid out on the lower roof level of the third floor where 42,000 square feet is utilized for the scientific checking of all moving parts on both new cars and ma-

chines that have been overhauled and repaired. A straight run of 300 feet is provided for braking tests, with the track marked off in feet to insure the accurate adjustment of Nash brakes at all speeds. This track not only makes it possible to bring precision methods to bear on automobile tests of all kinds, but also serves to keep hundreds of cars that would otherwise be tested on south side streets and boulevards out of the traffic jam.

Another unique feature that adds to the efficiency of the plant is the high speed ramp or runway which carries cars under their own power from the street level through the various service departments and to the test track. The ramp is built on a ten per cent grade and is operated by automatic electric traffic lights—green for "go," yellow for neutral and red for "stop." The lights work in a cycle of four minutes and 18 cars can be handled over the entire length of

*(Turn to page 36, please)*



Left: Modern plant of Chicago Nash Co. In oval: A section of the test track located on the roof of the building

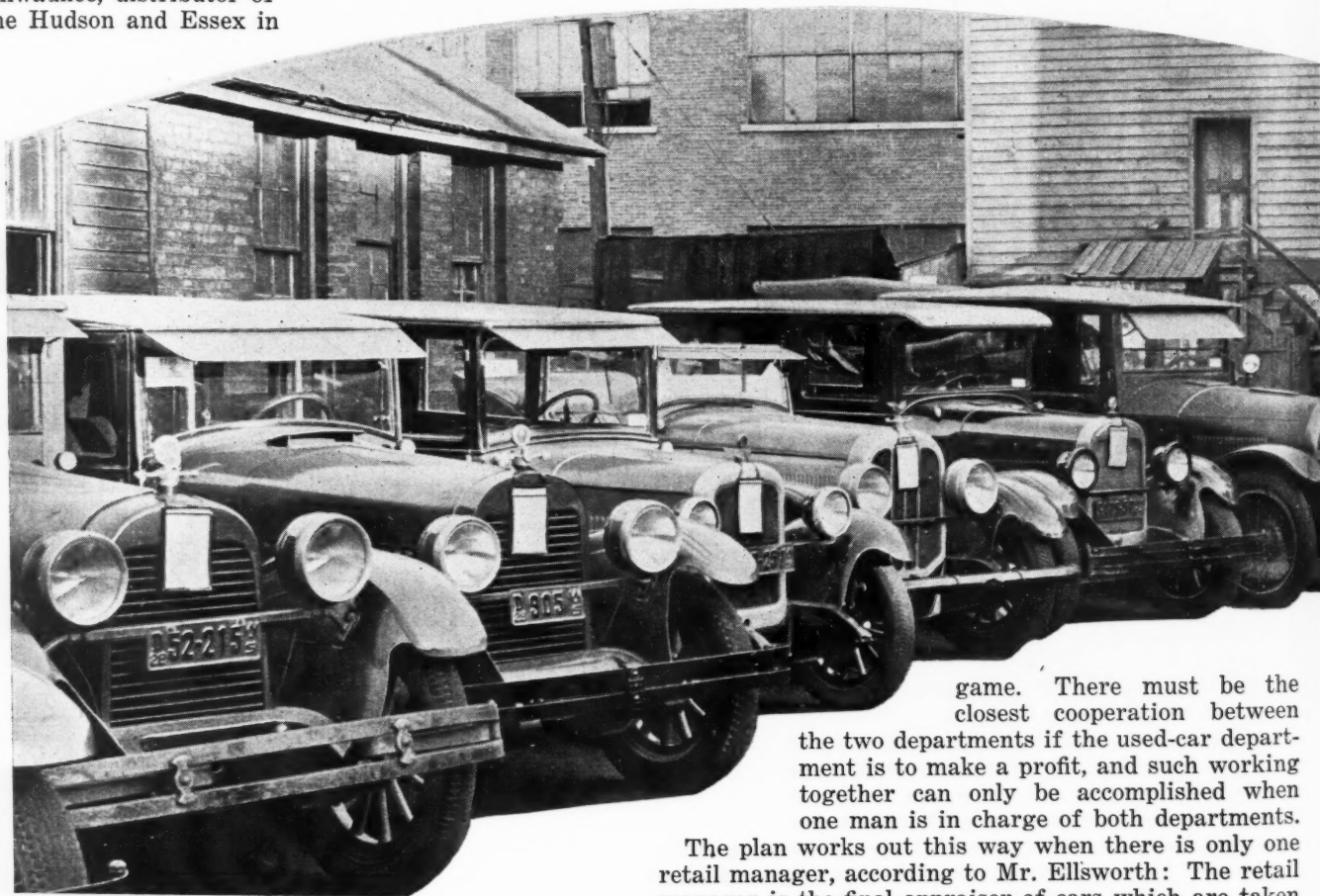
# A One-Man Job--- Managing the New and Used-Car Departments

*Milwaukee Company Departs From Two-Man Control  
to Eliminate Inefficient Buck Passing*

**C**ONTROL of the new and used-car departments by one retail sales manager is the logical way of handling these departments because the manager knows what is being done in each department all the time, particularly as to the used-car situation.

This is the opinion of the Jesse A. Smith Auto Co., Milwaukee, distributor of the Hudson and Essex in

used-car departments are under the direction of two different men, J. E. Ellsworth, retail manager, points out, and this often leads to quarrels between the two managers and constant bickering back and forth. If the manager of the used-car department cannot sell the cars, the manager of the new-car department is blamed for taking them in. It gets to be a "buck-passing"



Wisconsin and upper Michigan. After operating the two retail departments under two managers for years, the company officials decided to have one man in charge of both.

There is always a natural rivalry if the new and

game. There must be the closest cooperation between the two departments if the used-car department is to make a profit, and such working together can only be accomplished when one man is in charge of both departments.

The plan works out this way when there is only one retail manager, according to Mr. Ellsworth: The retail manager is the final appraiser of cars which are taken in on trades for new cars. He knows what the used car is worth to the company. He knows what makes and models of used cars sell rapidly enough to permit giving a fair allowance, and which are not moving off the floor.

The retail manager uses his judgment as to whether



By  
L. E.  
Meyer

J. E. Ellsworth,  
retail manager of  
new and used-car  
departments, Jesse  
A. Smith Co., Mil-  
waukee, at his desk



Left: Used car lot of the Jesse A. Smith Co., Milwaukee

a car should be taken in on a trade. If it is a make that is a slow mover, the customer cannot be given as large an allowance on it as on a car that is selling well in the used-car department. If the customer insists on a liberal trade-in allowance on his car, which may have a record of being a slow mover in the used-car department, the retail manager can judge whether it would be profitable to the company to turn down the new car sale, rather than tie up its money in a slow mover.

In the case where there are two managers for the different departments, the new-car department manager, in his effort to get volume, would probably give the customer the allowance he wanted, just to sell the new car, and then turn it into the used-car department.

Concentration of control of the two departments in one man makes him solely responsible for both. He cannot "pass the buck" to anyone, and hence he is not going to load up his used-car department with cars that are not going to sell.

It means that both departments are going to be more profitable and there will be less money invested in used cars because of the rapid turnover.

Mr. Ellsworth and the Jesse Smith company are believers in marking the prices of used cars plainly on the cars, and also in bargain sales. This company was among the first to inaugurate the instalment system of selling used cars, requiring a certain percentage of the sale price for the down payment and the balance in weekly, semi-monthly or monthly payments.

## A O N E - M A N J O B

"We mark the price plainly on all cars in the used-car department because doing so makes it easier to sell them," Mr. Ellsworth says. "The price of the used car is listed at the top of a sticker which is placed on the windshield. The terms are listed below, stating what down-payment is expected on the particular car and what the monthly payments are to be.

"When there are several used cars in the department, there cannot be a salesman for each car or for each customer. While a salesman is busy with one customer, another prospect who has just come in walks around, looking at each car. The price on each car attracts him, and as he usually has an idea as to what price he wants to pay, he can select the cars in that price range while he is waiting. When the salesman is ready to take care of him, his selection has been boiled down to a small group. Then the salesman can concentrate the sales talk on those cars.

"There is this disadvantage in not having the price on them," said Mr. Ellsworth. "A customer may notice a car on the floor that looks to be just about what he wants, but he steers away from it because he doesn't know the price and he doesn't want to ask the salesman the price of every car on the floor. Perhaps that particular car is in the price range that the customer could afford or wanted to pay. It means that the car is not sold and probably a sale is lost.

"The sales resistance is broken down for the salesman to a good extent if the cars are marked with the price and terms on them."

The Smith company went further last spring than just putting the price on the used cars. Every used car now has a description of it hanging on the front in a leather envelope. This is similar to the descriptions on new cars. The model is given, the color is listed, and the equipment on the car is noted on this tag. There is room for remarks, and at the bottom of the card is type which reads: "Checked, Gas—Oil—Water—Battery," and "Checked By." The cars are checked every month if they are in the department that long.

Such information on the car can also be read by the customer while he is waiting, and it is an aid to the salesman. Often a customer is "shopping around" on the used-car floor and the salesman exhausts an original line of sales talk for every car. The tag with special information on it enables the salesman to bring out those particular points about each car. The description also calls the attention of the customer to certain features on the car which he might overlook, and aids in making the sale.

Also this information is taken from the tags when advertisements are being drawn up for the newspapers.



*Main store floor of used-car department, Jesse A. Smith Co., Milwaukee, showing used cars tagged, with price and terms on the windshield, and description of cars in envelope on radiator*

As has been said, the company is a believer in holding special sales on used cars but "the used-car dealer must have something to offer to the public in a sale," according to Mr. Ellsworth. The "Red Tag Sale" is a monthly event at the Smith company, during the season. It is held on a Saturday and Sunday, once a month, and used cars are offered at reduced rates.

The company runs a lot where the cheaper used

cars are placed, and many of the bargains are on the lot. During one sale the company moved 23 used cars in two days, and in the month of March the salesman in charge of the lot moved 40 used cars.

The big job in the used-car department is to keep the cars moving, and this is why the lot is used in conjunction with the sales floor. The cheaper jobs are placed on the lot while the better used cars are kept inside. The lot is just a half block away from the headquarters of the Smith company, which is located at Seventh Street and Wisconsin Avenue, just out of the shopping district of down-town Milwaukee. The Smith company recently took over the building adjoining it, which is used entirely for the used-car department, giving it one of the largest departments of its kind in Wisconsin.

If a car is a slow mover inside, it is placed on the lot, and if it fails to move on the lot, it is brought back to the garage and more work is done on it to make it attractive to a prospect. The cars are shifted back and forth between the lot and the inside department, to stimulate the sales.

Classified advertising is used entirely for the used-car department, and the advertising is placed in only one paper in Milwaukee. Mr. Ellsworth said that they feel it is more productive to concentrate the advertising in one medium, where more space can be taken, than in dividing the advertising and not being able to use a liberal amount of space in each paper. The advertising must be kept down as much as possible on the used cars because each car is charged up with a percentage of the cost of the space, so that the company knows just how much profit there is on each used car.

A survey made by the company recently showed that the sales lot and the advertising being done were about equal in drawing power.

The Jesse Smith Co. sells used cars on the instalment plan. Any car up to \$100 calls for a down payment of \$25, and up to \$200 the down payment is \$50. The higher priced cars require a larger down payment, which is usually 40 per cent of the price of the car.

A 40 per cent down payment is too much to ask on  
(Turn to page 36, please)



Pete Keenan



A MOTOR AGE IMPRESSION = H. H. BUGGIE  
President = Dura Co.

# Trumping Business

*The Plan of the Gambill Motor Co., of Chicago, That Doubled Shop Volume in a Two-Year Period*

**T**WO years ago the Gambill Motor Co. of Chicago, considered it good business for its service department to handle from 50 to 60 cars a day. But now it is the usual thing for the service department to handle from 100 to 120 cars a day.

This remarkable change, in the opinion of the officials of the company, is due almost wholly to one single fact—the organization and steady growth of the Gambill Hupp Service Club, with a present membership of over 14,000 owners.

The company officials do not think of the club as having “originated.” They say, rather, that it was “assembled.” In the words of C. E. Gambill, president of the company and former president of both the Chicago Automobile Trade Association and the National Automobile Dealers Association, “There is nothing original about it. It is only a pattern. It is an assembled plan which must be continuously followed up.”

The actual “assembling” of the plan for the Gambill Hupp Service Club dates back to the spring of 1926. At that time the company just had completed a large sales and service building, a virtual counterpart of the great Hupmobile factory in Detroit, extending entirely through a long Chicago block, from 2230 Michigan Ave. to 2231 South Wabash Ave. and including over 180,000 sq. ft. of floor space. The service department of this building had been planned to carry out the company's ambition of supplying all Hupmobile owners within a convenient radius with an unsurpassed Hupmobile service.

In its attempt to fulfill this service ambition, the Gambill Motor Co. officials began the assembling of service ideas from all lines of business—any kind of a service idea that seemingly might have application to the service needs of Hupmobile owners. They included in this study the service developments of public motor clubs, and they also requested service suggestions from their community Hupmobile owners. Gradually, many of these service ideas and suggestions were fused. The Gambill Hupp Service Club was started, and for more than two years now the club has been rapidly increasing in membership.

The average Hupmobile prospect, in the Chicago ter-



C. E. Gambill, president of the Gambill Motor Co., Hupmobile distributor, of Chicago, and former head of the National Automobile Dealers Association

By  
Randall  
R.  
Howard

ritory, begins to hear about the club even before he purchases his car, for the company officials agree that the service idea which the club represents has been a most important factor in the record sale of Hupmobiles in Chicago.

Right: The comfortable club room maintained by the Gambill Motor Co. for the convenience of members of its service club



Within a few days after the delivery of his car, the new owner receives from the club secretary a cordial letter of welcome into the “Hupmobile family,” and the offer of a free membership in the Gambill Hupp Service Club. The new owner is told that “the only obligation on your part is bringing your car into our service station once each month for a free inspection.”

“There are no dues or obligations,” continues the



# with a Service Club



*Above: An emergency service is one of the features of the Gambill Hupp Service Club*

letter. "Your car of course should be greased and oiled each month and we have a special price of \$1.95 for this work.

"Surely you can see the advantage of having your car looked over carefully once each month and receiving a written report on its condition. In other words, through this monthly inspection we are attempting to eliminate trouble before trouble actually occurs. And please do not overlook the fact that this inspection

does not cost you one cent," the letter points out.

"The service club gives you many privileges that go toward helping you to get more service and satisfaction out of your purchase. We hope you will make application for membership immediately, for it means 'Service That Satisfies.'

"Please bear in mind that the motor car of today is so perfect that it will run without much attention; but like any fine piece of machinery, it will give much better and longer service if given proper care. And the Gambill Hupp Service Club insures proper care.

"Sign the enclosed membership application card and mail it today. The club will help to keep you—a happy

## TRUMPING BUSINESS WITH A SERVICE CLUB

Hupmobile Owner."

Enclosed with this letter is a 17 by 22 "broadside," which pictures and explains in detail the various advantages of the club to all Hupmobile owners. The folder includes a conspicuous listing of the "10 exclusive features offered only to members of this club." These features include:

"1. Free Inspection: Your car will be given one complete inspection every month, including thorough examination of general condition of the motor, transmission, rear axle, steering gear and wheel bearings.

"2. Quick Adjustment: Your car will receive once a month and free of charge, carburetor adjustment, adjustment of ignition points, tightening spark plugs and adjusting fan belt.

"3. Emergency Service: For emergency service any place in Chicago—a flat tire, or any minor mechanical trouble—a quick service man will rush to your assistance and make any repairs and adjustments that can be made in 15 minutes, at a flat charge of only \$1.

"4. Free Towing: We will tow your car from any place in the city to our central service station free of charge. If a derrick is required, a flat charge of \$2.50 will be made.

"5. Monthly Greasing and Oiling Special at \$1.95: Your car will receive a monthly greasing and oiling to keep it in perfectly lubricated condition, which adds life and satisfaction. This price is much lower than that offered elsewhere.

"6. New Tires for Old: You will receive liberal allowances on your old tires in exchange for new tires.

"7. Special Prices of Oil, Grease and Accessories: You will receive special prices on oil, grease and accessories. When we change the oil in your motor, a memo seal will be placed on your speedometer showing mileage and date oil was changed.

"8. Special Insurance Service: You will have the service of a special department handling insurance for club members.

"9. Service Bulletin: You will receive the club members' Service Bulletin, containing many interesting and valuable suggestions on the care and operation of your Hupmobile.

"10. Two Months' Greasing and Oiling Free: To club members in good standing who have brought their cars in every month for 10 months for greasing and oiling, we will furnish two months' greasing and oiling free of charge."

Attached to this "broadside" is a postal-card application form for club membership. When the new owner returns this postal (and practically all of them do) he receives from the secretary another letter, and a neat membership card in a leather case, with attached chain for his automobile keys. And the new member is reminded that he should "start off right by bringing your car in some time this month, for the first club inspection and monthly greasing and oiling."



*The home of the Gambill Motor Co. in Chicago*

When he brings in his car for the first time he is given a regular monthly date for future inspections. Should the club member be absent from the city for more than a month, he is advised that he must, to retain full-fledged membership standing, present on his return some record to show that his car has been having authorized Hupmobile service.

The free monthly inspection for club members is very thorough,

including some 40 check-ups, as listed on the free monthly inspection ticket. This inspection usually requires from 30 to 45 minutes, aside from simple adjustments that are also made free. This free inspection also includes a street test of 15 to 20 minutes, and, if possible, the car owner is asked to go along. The results of this inspection are recorded on the inspection blank which is typed in triplicate, with one copy for the owner. After the owner has seen this report, or after the substance of it has been telephoned to him, he usually OK's the full recommended service needs of his car. In fact most owners will give an advance OK, when they bring in their cars, but it is the policy of the service department always to report first to the owner.

It has been found that owners often forget the date when their car is due for another monthly inspection. So, three days in advance of his scheduled date, a neat card reminder is mailed, asking him to "Bring your Hupmobile tomorrow and ask for Mr. ...." Then, if he still does not bring his car, he is further reminded by a personal telephone call.

Following the completion of the service job, the member receives a letter from the service manager with an enclosed return postal card on which he is asked to report if he received courteous attention and satisfactory work; and he is asked for service improvement suggestions, and to report the name of any friend who might buy a Hupmobile. About one-fourth of such cards are returned, which is a high follow-up average.

As a reward for continuous regularity in bringing in his car for inspection and greasing, the member receives each sixth greasing free of charge. And there is another manner in which the loyalty and regularity of the club member may earn him a substantial cash reward. For, with his initial membership emblems, the club member also receives a "check book" on the "Bank of Mutual Service" which is "affiliated with the Gambill Hupp Service Club." The book contains six blank checks, on each of which may be reported the name of a prospect for either a new Hupmobile six or eight, or for a "Gambill Blue Ribbon" used car.

If such a reported prospect is thus originally recorded and if a sale is made within 90 days, the club member is presented with a \$20 merchandise certificate for the sale of a new Hupmobile six or eight, or a \$10 merchandise certificate for the sale of a used car. Another way of reporting such names, as previously mentioned,

*(Turn to page 38, please)*

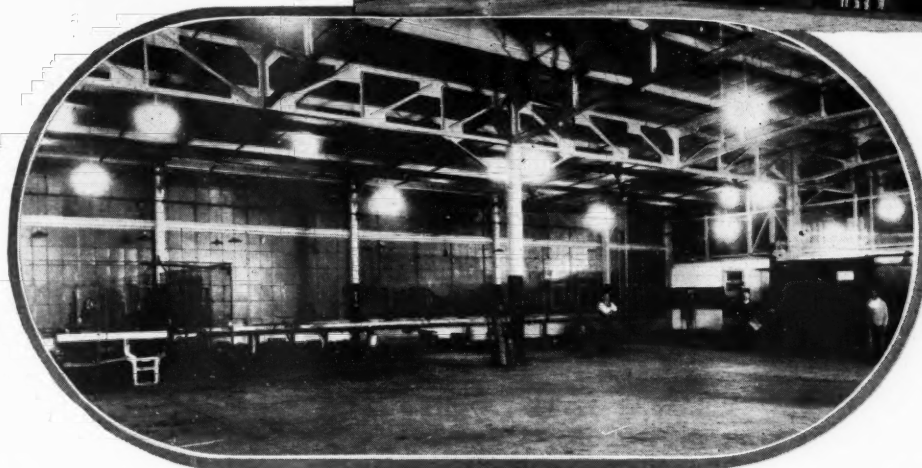


## SERVICE BEGINS BEFORE THE SALE

(Continued from page 21)

Right: The establishment of the Browder & Hoskins Co., Louisville, Ky., Chevrolet dealer, with employees lined up outside

Below: One side of the service shop, showing the solid side of glass which makes for ideal working conditions



considerable extent gages the amount of trading that can be done on new cars. In order to move new cars the used cars have to be moved.

Too many dealers do not keep very clear records of their used cars; don't know just how many they have in hand, the date received, the amount invested in them, and other things they should know in order to look after the department.

Mr. Browder paid a visit to the used car manager's office and displayed two books, which tell the whole story of the used car department; one book showing each car received and the other showing each car sold.

Instead of running these cars by serial numbers, or license numbers, which would make it hard to find them, the numbers are based on the number of the month, the day of the month, and the number of the cars traded in on that date. For instance 4111 means that the car was the eleventh car traded on the first day of April. If it were the first car that day it would be 4101. As each car is traded in the record goes to the used car department. A tag goes on the car carrying the number, selling price, etc. A card is made out with this same number, showing the make, style, motor and serial numbers, license number, year, mileage, date received, which, of course, corresponds to the card number, salesman who made the trade, remarks, and repair order number, if repairs are necessary. These cards are filed in order of numbers, and when sold the opposite side of the card, or right-hand side, carries a record of the sale, which makes it easy to check up on any car from these cards.

The writer asked Mr. Browder: "Would you not have two cars of the same number, in event of a car traded in in January 1, 1927, still being on hand on January 1, 1928?"

Mr. Browder replied: "No, we never keep them that

long. In fact we seldom have a car more than four months. We will move it, or else junk it. You can not afford to carry old cars too long. They tie up capital, get older and more obsolete all the time, and harder to sell, while the rubber is going bad, and if they won't sell at the price you are asking, you will have to drop the price to a level at which they sell. It sort of balances, in that you will lose money on one car and make on another.

"We have been told that our method of keeping used car re-

ords is too complicated, but a good used car man has no trouble in keeping the records, and many of us can go to the books, and find out anything we wish to know very quickly, whether he is on hand or not.

"At the end of each month we make up a sheet showing the number of cars on hand in the used car stock, giving the number by month, and the numbers of each. We know which cars we are going to have to exert some pressure upon. With this system your used car stock is not getting jammed with cars that have been on hand for six to eight months. On the first of December, 1927, the recapitulation of used cars showed we had just two that were traded in during August, two traded in during September, 18 in October and 41 traded in during November, which were still with us.

"As the last car is sold, leaving the received and sold sheets cleaned up, two diagonal lines are drawn from the four corners of the sheet, to show that it is past history, and it goes into a binder file, where at any time we can find out the complete record of that particular car from the time we got it until we sold it. The system is really very easy after you get it started, and we wouldn't be without it.

"Through the car numbers we know just how many cars were traded in on any particular date, and how many of them we have left. It isn't often that they will run into double numbers, such as 4111 or 4112, except perhaps on a Saturday, when sales are especially heavy on new cars."

The numbers are carried right on down the used car received sheet.

The used car sold sheet carried the numbers on the margin in just the same way as the received sheet, except that the record of sale is held up until it is actually sold or junked out. If junked a rubber stamp with "JUNKED" is placed where the sales figures otherwise would go.

(Turn to page 38, please)



*This new limousine model, known as the "Southampton," is the latest and one of the most luxurious of the Stutz custom-built models. Woodwork is an outstanding feature of the interior trim. Window casings, door casings and the partition between the driver's compartment and the tonneau are embellished with highly polished and finely-grained walnut panels of unusual width. Auxiliary seats are likewise hidden by panels of the same material. The seat cushions, of the embroidered reversible type, are filled with down and present the appearance of a luxurious davenport. All the de luxe equipment of other Stutz models is present in the "Southampton." The new car is priced at \$4595, f.o.b. the factory.*

## When a Salesman Isn't Even an Order Taker

THE other day I walked into the salesroom of a prominent Detroit dealer with a prospective customer. We looked around for a minute and a salesman approached.

"Are you being taken care of?" said the salesman, mopping his brow.

"I don't know as we need any taking care of," retorted the prospective customer good naturedly.

"I'd like to wrap you up one of our cars today," came back the salesman.

"Will you put a postage stamp on it and send it prepaid?" retorted the customer, no doubt with the idea of conveying to the salesman that he really was interested.

"I would like to sell you one of these jobs. Business is awfully rotten," rejoined the salesman, with emphasis on "rotten."

In the conversation which ensued the prospective customer indicated to the salesman that he had a car of the same make which he would like to turn in.

"About two months ago we would have been able to talk business," said the salesman, adding that it is hard to move 'em now.

"I brought my car to this same salesroom about three months ago and it was appraised. How much it was appraised for I was never told. At that time I wanted to buy a new car. The salesman told me he would see me the next day. He hasn't called yet," said the customer, who then proceeded to tell of a complete overhaul job which he had since had done on the car.

"That's a shame," said the salesman. "Gee, I wish I had been that salesman! You'd either be driving one of our new cars or I would run you ragged until you did."

"How much do you want?" asked the salesman.

"It isn't a question of how much I want so much as how much you will give me."

"Can't you give me some idea?" asked the salesman.

"I came here to find out what my car is worth on a trade," replied the prospective customer.

At this juncture of the proceedings a robust man, apparently another salesman, strode into the salesroom

and butted into the conversation without apology.

"Who won the ball game?" asked this newcomer.

"The Yanks beat the Tigers 12 to 1 in the first game," replied the salesman, and for the moment he ignored us to carry on an animated conversation with his buddy which really seemed to interest him. As we started to pull away he saw fit to continue talking with the prospective customer.

"Of course you know this is a business proposition," said the salesman. "I would say roughly we could give you \$300 to \$350 for your car. Of course I cannot tell definitely until we have seen it and had a chance to appraise it. Now can you give me an idea of how much you wanted?" said the salesman.

"Yes, I thought I should get \$450 for my car. At least I believe it should be worth that much especially in view of all that I spent in having it rebuilt," replied the prospective customer.

"I'm sorry but I guess we can't get together," said the salesman.

The customer sort of edged away. He looked around the showroom and sort of waited for the salesman to say something more.

"Don't hurry away," said the salesman, "just make yourself at home."

The conversation was ended. All in all we had been in the showroom upward of 5 minutes. Not one word did the salesman say in argument why the prospective customer should buy blank make of car. Neither did he open the door of a floor model and ask the customer to step into the car so that he could point out its various features. He didn't even try to sell the customer on the idea that it would be advantageous to take less for the used car than he had originally wanted. As a matter of fact he let the customer and the writer depart without asking for either of our names, and the truth of the matter was *we were both interested in buying.*

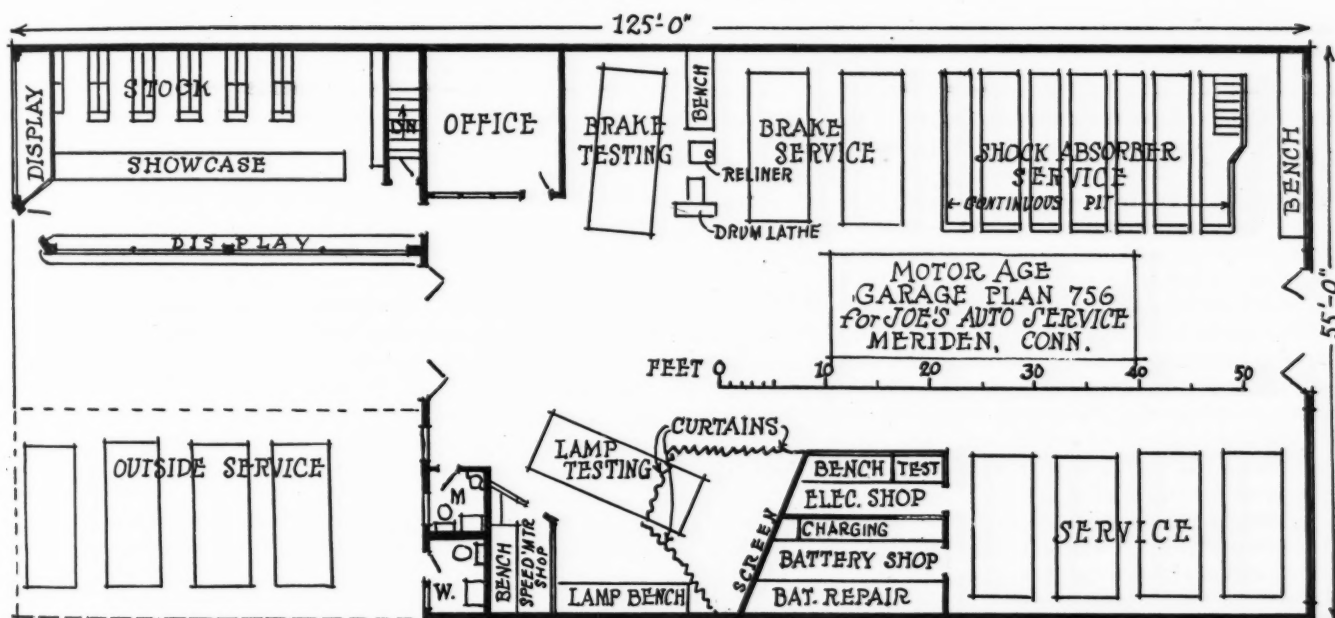
It's no wonder then that business is rotten. At least as far as this particular salesman is concerned. I'll take that back. He doesn't deserve to be listed in the category of a salesman. *He isn't even a good order taker.*—L. C. D.



# A Garage Layout for Special Service

*Lamp Testing is the Only Service That Does Not Fit Readily Into This Arrangement. There is No Place Where It Has Enough Length to Be Just Right Without Too Much Sacrifice of Space*

By TOM WILDER



YOUR combination of services is rather unusual, but the only question about the success of the project would be due to the location. We should prefer a good corner with a filling station to make contact with the customer so that you could get your share of the transient trade. In an inside location like this, most of the transients will pass by without seeing you unless you make some attempt to display your shop in some unusual way. One suggestion would be that the front part, used as a store, be built up higher than the surrounding buildings in the form of a tower with the services enumerated in easy-to-read signs on its faces.

It will be necessary to eliminate wall benches on account of the narrowness of the building, which should be from 60 to 65 ft. wide for a service building of this kind, but by placing the benches and shops between the service spaces, the aisle can be kept of good width.

*I AM enclosing sketch of a building which I would like to get a layout on. I am moving into this building in about a month and would appreciate your sending me your suggestions.*

*I am specializing in electrical and battery service for which I will have the latest type of equipment, also brake servicing, using a Cowdrey Brake Tester. I also have three pits for shock absorber installation and expect to have a chart for focusing headlights, also speedometer testing equipment, and may do spring installations. Very truly yours, Joe's Auto Service, 4 Perkins St., Meriden, Conn.*

The headlight testing is the only thing that requires more space than we have at our disposal and to get around this we have placed the testing stand and screen at an angle and worked in other shops around it in order to save space. Light necessary to the other departments is a detriment here, however, and to get rid of the light we are suggesting black curtains hung on rods so that they can be drawn aside to get the car in position. With a canopy over the enclosure a great enough degree of darkness can easily be maintained.

The pit for shock absorber service and installation is continuous and the runways across it are 8 or 10-in. "I" beams laid side up; these are much stronger than channels, which are liable to sag.

If you do not build the store on the other side of the drive, the space would be fine for quick service and

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## A O N E - M A N J O B

(Continued from page 28)

a low-priced used car, according to Mr. Ellsworth, if they are to be moved, "so we fixed a flat down-payment rate on the cars in the \$100 and \$200 classes. People who buy the low-priced cars usually have not got 40 per cent for a down payment but they will be able to buy the car on the flat rate we have set, and then pay for it on the weekly basis. We require a weekly payment of \$5 for cars under \$200. When extending credit on used cars we find out when the buyer gets his salary. If it is weekly, then we make him pay weekly, but if it is monthly or semi-monthly, we have him pay \$20 monthly or \$10 semi-monthly. He must make the payment on the day after pay-day.

"There is a collector of delinquent accounts in our organization, who does nothing else but follow and collect the delinquent accounts. If the customer fails to make his payment the day after his pay-day, the collector goes out the second day after to get it. Then if the customer cannot meet the payment, we hold the car until he can.

"When a dealer permits a customer to lapse a payment, it means that the customer must pay double the amount the next time. Usually the customer is unable to meet the double payment, and thus the transaction is carried out over a longer period than contracted for. We take the car right in, and it makes the customer realize that we mean business, and will not let payments slide. We can sell the car again but if he has a good excuse and can show us that he will be able to meet the payments regularly in the future, and pays the delinquent one, he gets his car back."

The Smith company handles its own paper on used cars and makes a finance charge to the customer. Notes are turned over to the bank that the company does business with. Mr. Ellsworth says that when the buyer of the used car has to deal with the bank he is more certain of paying each note as it comes due, than if he were paying the dealer.

Credit is very important in the used-car business and the extension of it calls for the utmost in good judgment, especially in the lower priced cars, because the buyers of these classes are usually people who have little ready money and must be watched closely so that they do not lapse their payment.

A "Car Purchaser's Reference Report" for the purpose of securing credit has been worked out by the Smith company, and every buyer of a used car who wants credit must fill out one of these reference reports and it is kept on file by the company.

Intimate information is required of the purchaser, and he must give the names of three business concerns that have extended credit to him. These references are checked almost immediately to find out what his credit standing is and how he has paid his bills with other people.

Two important questions which state the position of the Smith company in the matter of credit extension are listed and are: "Do you understand that the chattel mortgage which you will sign for our protection per-

mits us to take possession of the car at any time you are delinquent in your obligation?" and "Do you understand that in extending credit to you, we will expect you to meet your notes at the First Wisconsin National Bank of Milwaukee promptly on the day they fall due?"

Most of the business on the lot is done on Saturday and Sunday, when it is difficult to secure credit information from the references, but the salesmen on the lot get in touch with the retail manager at headquarters and he decides whether credit should be extended. The references are checked up on Monday.

Salesmen for the used-car department are recruited from the new-car delivery department of the Smith company. The new-car delivery department consists of the foreman and a crew of young fellows who drive new cars from the unloading terminal in Milwaukee to the garage, and who take care of them while they are on the floor and warehouse. The best of these fellows are taken to sell used cars. They are put on the lot and paid on a salary and one per cent commission.

Salesmen who have more ability and who make more money are not inclined to put much effort into selling a cheap used car because there is not enough money in it. The young fellows on a salary and small commission will work to sell the lower priced cars. This is a good training ground, too, for a sales organization for higher priced used cars and for new cars.

The quota of the used-car department of the Smith company this season is 100 cars a month. The sales force started off in March by selling 137 used cars. April was a poor month due to the weather and the volume dropped down to 82, but it came back in May to 110 sales, thus averaging out more than 100 sales each month. The lot is only good for six months of the year but when it is running, it is a good asset in disposing of the used cars.

An important point in the selling of used cars, which was brought out by Mr. Ellsworth, is having the used car in the best of condition when a prospect is being given a demonstration. The car should be carefully checked over as to gasoline, oil, water, air in the tires, ignition, battery, lights, etc., so that no minor trouble will be experienced while demonstrating.

The major things are done to a car when it is being overhauled, but it frequently happens that the small things are overlooked, unintentionally. If a prospect is being given a demonstration, and the salesman finds that he needs gas, and then has to check the water and oil, and later discovers that one light is not burning, it proves very embarrassing to the salesman, and may give the impression to the prospect that if the small things have not been done, perhaps little attention had been given to the big things. It creates a doubt in his mind as to whether he should buy the car.

The Smith company has all the used cars checked over carefully before giving demonstrations, to avoid the possibility of minor trouble, and to permit the salesman to concentrate his mind on his sales talk during the demonstration.

## Chicago Nash Has Test Track on Roof

(Continued from page 25)

the ramp in that time. In the morning, when Nash owners bring their cars in for service, the lights allow 160 seconds for upward traffic, 20 seconds for the neutral or clearing period and 60 seconds for down traffic. The system is reversed during the afternoon

when service floors are being cleared of cars.

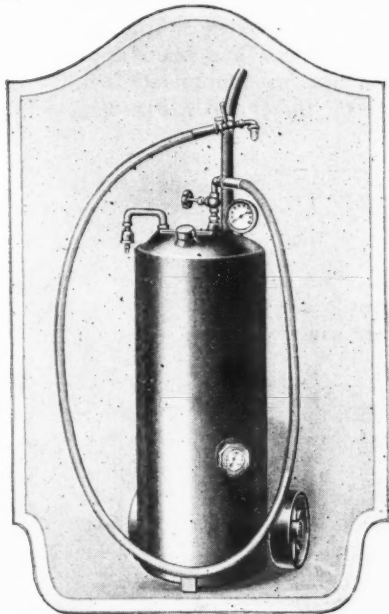
Other unusual equipment features include fast passenger elevators, dumb waiters to bear parts and material to the various departments, a hoist for quick service and emergency work, oil burners in the central heating plant, an incinerator system and electrically operated shop equipment.



# Useful Shop Equipment

## Hydraulic Brake Bleeder

**T**HE Cardinal Hydraulic Brake Bleeder shown here is a new device for the speedy bleeding of hydraulic brake lines and chambers.



The tank is of brazed construction with riveted seams and is equipped with seven feet of  $\frac{1}{4}$  in. discharge hose with control valve which gives the operator positive finger-tip control. This valve is located just above adaptor which connects to pipe line which must be detached at the supply tank under the hood of the car.

The Bleeder Tank is also equipped with a standard Schraeder valve and specially designed pressure gauge registering a maximum of thirty pounds. The Schraeder valve through which the air is forced into the tank is seated in a specially designed filter which separates all moisture from the air as it goes into the tank assuring absolute safety to the brake mechanism.

The Cardinal Hydraulic Brake Bleeder is made by the Cardinal Mfg. Co., Dayton, Ohio, who claim that on flat rate charges for this operation this equipment will more than double the profit to the shop as well as increase the sale of fluid because it completely removes all stagnant fluid from lines and chambers.

## Shop Ventilator

**A** NEW type of ventilating fan designed to comply with the latest insurance ruling and developed for a

ventilating of paint shops has been developed by Binks Spray Equipment Co., 3114-26 Carroll Ave., Chicago, Ill. The new ruling demands an exhaust unit wherein the motor is separated entirely from the fan and exhaust duct. In other words, it must be so located that there is no possible contact with the spray mist in the exhausted currents from the finishing room. The Binks fan shown herewith complies with that requirement. The fan itself is belt-driven from an electric motor which is contained in the housing above the fan. These fans are designed for



mountings in the present window frames of buildings in which they may be used. The handles on the motor hood make the motor readily available for oiling or cleaning. The 16-in. size has a fan carrying six blades and a price ranging from \$82 to \$87, depending on the kind of current available. In the 18-in. fan with six blades, the price range is from \$135 to \$45, again depending upon the current available. The smaller fan has an exhausting capacity of approximately 2500 cu. ft. of air per minute, while the larger one exhausts at the rate of approximately 7000 cu. ft. of air per minute.

## Drum Turning Lathe

**T**RU-DRUM is a brake drum turning lathe capable of handling all types of brake drums, both internal and

external, from passenger cars or trucks. With Tru-Drum it is unnecessary to dismount the drum or even the tire from the wheel in order to recondition either the inner or outer surfaces of the drum. Due to its construction and design it is possible to mount the wheel for drum turning and then let the machine proceed with the job without further attention until the drum is finished. Naturally this saving in time is important in all service stations. A No. 1 assembly includes complete truck and pleasure car equipment and sells for \$635. The approximate shipping weight is 1000 lb. This assembly includes the lathe equipped with a  $\frac{1}{2}$  hp. motor, heavy-duty truck attachment and truck cones with mandrels and wrenches, complete assortment of cones and mandrels for standard makes of pleasure cars. The No. 2 assortment sells for \$535 and is for truck work only, while the No. 3 assortment is for passenger car service only and sells for \$525. While the prices quoted are f.o.b. factory, which is the Manufacturers' Auto Equipment Co. of 995 E. Green St., Pasadena, Calif., saving in freight is effected by quantity shipments which the manufacturer makes to its warehouses in New York, Chicago and Memphis. The illustration herewith shows the Tru-Drum lathe set up and ready for work with the operator fitting the proper mandrel for truing a drum without removing the drum from the wheel.

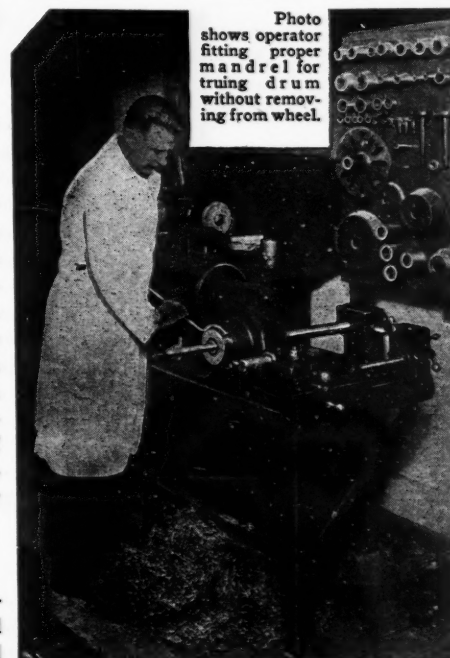


Photo shows operator fitting proper mandrel for truing drum without removing from wheel.

## TRUMPING BUSINESS WITH A SERVICE CLUB

(Continued from page 32)

is on the postal-card follow-up of every monthly service job. Some club members thus earn enough of merchandising certificates for the entire upkeep of their cars, including added equipment.

As an appeal to club members, the company advertises "mechanical departments flooded with sunlight and fresh air; cleanliness that assures every car being returned to its owner as it should be." It further pledges every service man to be "a courteous, attentive and efficient attendant, every mechanic a factory-trained expert, every service a thorough, conscientious and exacting duty." It also assures that it has "every facility known to automotive science for the efficient and economical maintenance of service."

In the service reception department it maintains a comfortable waiting room for the convenience of club members while minor car adjustments are being made.

On the wall of the service reception department is posted a large sign, stating the service ideals of the company, over the name of the president and the names of the service department superintendent, manager and foremen. Another conspicuous sign states that: "Our employees are not permitted to accept gratuities. Please do not embarrass them by offering same. Employees accepting gratuities are subject to dismissal."

The service ideal which is embodied in the Gambill Hupp Service Club has had a consistent and steady growth. The plan was first put into effect at the central service station, and adopted by the 80 dealers of the Gambill Motor Co. in the three states of Illinois, Indiana and Wisconsin. Also the plan has been approved by the Hupmobile factory, and recommended to all of its distributors and dealers in the United States and Canada.

### Dodge Alters Body Lines of Senior 6

(Continued from page 24)

A Stromberg OX-3 carburetor is used on the Senior.

In the lubricating system a crankcase ventilator is found, exhausting through the rear valve housing cover plate, and provided with an off and on control.

A new type of clutch plate has been adopted in the Senior. As formerly it is of Borg & Beck manufacture and 11 in. in diameter. Its feature is the use between the triangular hub and rim of a square section rubber strip mounted in compression, and used for cushioning the drive. Another feature of the plate is the rim design adopted for obtaining smooth engagement. The rim is split into 12 segments, and alternate segments are offset in opposite directions from the center plane of the disk. The molded asbestos composition facings

are annular in shape, but riveted only to alternate segments. In this manner only half the segments engage initially on either side when the clutch pedal is released.

In addition to the accessories already mentioned, there are a fuel gage and engine thermometer mounted with the usual instruments on the frosted silver instrument panel, illuminated by a hooded lamp. A cigar lighter is also provided, being of the removable "pass-around" type mounted on the steering column bracket. Lovejoy shock absorbers are standard, ball-and-socket links being used on the front units and straps on the rear. The tool equipment includes a strap wrench for the removal of the large round hub caps.

### Service Begins Before the Sale

(Continued from page 33)

Record keeping of used car sales is far more important than records of new cars, as the latter are coming in all the time and going right on out, whereas the used car comes in, and if it isn't moved it will stick. Moving old cars, especially those that are really old and getting junky, is a vital business function.

The firm of Browder & Hoskins has been identified with the automotive business in Louisville for thirteen years. For a number of years it operated one of the larger downtown Ford agencies, which was sold to employees in 1921, at which time the partners purchased an insurance agency, which they operated for

two years. However, that business was too quiet, and in 1923 they re-entered the automotive field as Chevrolet agents. The organization has made wonderful progress. It is a closed corporation with but five stockholders, these including each of the department managers, all of whom must hold stock in order that he may be properly interested in seeing the business develop. George T. Browder is president and general manager; R. H. Hoskins, vice-president and sales manager; E. T. Etheridge, treasurer, accountant and office manager; R. H. Stafford, secretary, in charge of parts and service, and William Jekel, in charge of used cars.

### A Garage Layout for Special Service

(Continued from page 35)

adjustments such as checking batteries, etc., in fact, it might pay you better in that way than it would in a store to rent, if that is what you have in mind, for there would be no investment, whereas the store would require quite an investment and would only do a little better than interest, taxes, insurance, etc., on the outlay.

Disregarding the value of the store, the layout would be much better in the form of a service yard as we have shown because this would give it a form of hospitality that would be lacking in the narrow passage. Strangers do not like to drive into a place like this without knowing more about what is at the end of the passage. That

is one reason for the success of the open air service station of the West—the customer can see at a glance what kind of a place he is getting into.

We have not suggested any construction because you probably have arranged that already. If you have not arranged for plenty of skylight you should do so because skylight will be absolutely essential.

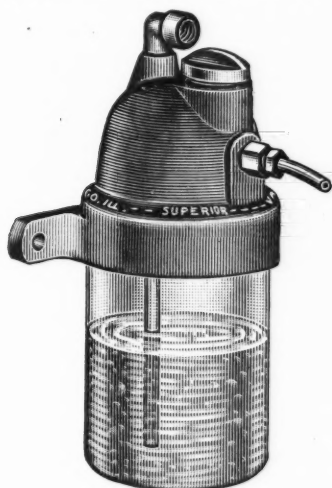
If you have spring service, you should have an overhead track and hoist for the easy lifting of cars, to take the strain off the springs. By installing this over the pits, you would have an ideal means of making spring changes and repairs.



## The Latest in Accessories

### Vapor Oiler

**A** LUBRICATOR that takes care of the lubrication of the valve mechanism and upper part of the cylinder bores is known as the Superior Vapor-Oiler and is produced by Kacena-Thaler Co., 1466 So. Michigan Avenue, Chicago, Ill. This oiler is attached to the dash and its lubrication line is connected to the center of the intake manifold for equal distribution. Fittings and screws required for the mounting are provided. It is said that 1 qt. of the special oil which should be used



in this Vapor-Oiler will run about 5000 miles. The cost of the oil per quart is \$1. The complete unit, including 1 qt. of oil, sells for \$6.50.

### Radius Rod Anti-Rattler

**T**HE radius rod of the new Ford car is of the same general design as the one used on the old model, although much heavier. This rod is fastened in the same manner as the old type was and can be kept quiet with an anti-rattler.



The Apco-Mossberg Corp. of Attleboro, Mass., has spent much time and care in designing such an Anti-Rattler and now offers Ford owners the new No. 22.

This device is fitted with a Zerk nipple for lubricating and as oiling is very

necessary in order to prevent wear, this feature is worth while.

The new Anti-Rattler is made of malleable iron. It has a bronze machined stud which will not cut into the ball and a heavy spring with ground ends.

No adjustment of this device is provided for as the studs are heavy enough to eliminate the necessity of adjustment.

### Steel Tire Cover

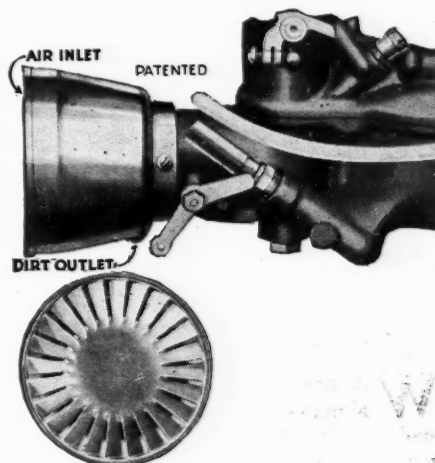
**A** REALLY different accessory is seen in the new steel tire cover, which is made by the Federal Pressed Steel Co., whose factory is at Milwaukee, and whose sales office is located at 450 E. Ohio St., Chicago, Ill. The manufacturer refers to this as the "Tire Cover De Luxe by Federal." There is no doubt that its appearance is extremely neat and it is entirely possible to finish this cover in any color to harmonize with the car. It is regularly finished in a rich black Duco, highly polished, and carries two fine gold stripes around the center and one wide band of gold-stripping around the outside. This cover is secured to the spare tire by two clamps which are positive in their action and prevent any possibility of rattles or vibration. The cover is easy to take off or put on, the entire operation requiring only 30 seconds. The construction is of one piece and light in weight. One of the two knurled knobs supplied for clamping the cover to the tire is drilled so that the cover may be locked by the use of a padlock.



It is said that the cover is not affected in any way by climatic conditions. The manufacturer announces that only four sizes are required to fit 98 per cent of the tires used on cars today. Inquiries should be addressed directly to the Federal Pressed Steel Co., Accessory Division, 450 E. Ohio St., Chicago, Ill.

### Ford Air Cleaner

**A** N air cleaner for use on the carburetor of the new Ford cars and trucks has been produced by the Marquette Mfg. Co. of St. Paul, Minn. This is a centrifugal cleaner. The dust is separated from the air by the whirling motion imparted to the incoming air. The fins or blades of the cleaner are stationary and give the incoming air this swift whirling motion. The cone shape of the cleaner accelerates the velocity. This cleaner is attractively finished in lacquer. The installation is



very simple, as it is merely necessary to slip the cleaner over the end of the carburetor and tighten the set-screw seen in the illustration. The dirt is expelled at the bottom. The list price is \$1.90, dealer's price in lots of 1 to 10 is \$1.27 and in lots of 10 or more \$1.15.

### Wrench Sets

**A** NEW "Parabolic" type (pear-shaped head) wrench has been announced by the Vlcek Tool Company, 3018 E. 87th St., Cleveland, Ohio. This wrench may be had in either carbon or chrome-molybdenum steel, in sets of six wrenches to a set. Twelve



sizes of wrench openings are thus provided. It is claimed that the parabolic design of these wrenches enables them to get into the tightest places, with the strength of the wrench so distributed throughout the jaw that there is no danger of the jaw spreading under normal pressure.

# READERS' CLEARING HOUSE

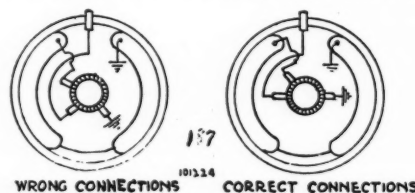
Questions Answered By C. Edward Packer

## Main Brushes Should be Opposite Each Other

I am sending you a diagram of a Remy generator that failed to generate and still refuses to. This generator is from a Superior Chevrolet and is model 950-A. We have installed new brushes and sanded them in very carefully. We had the commutator turned down in a lathe and tested the armature for shorts and open coils with growler and test lamp and it is O. K. We also tested the brushes and fields and they are all right, and still it refuses to generate and the field coils are not reversed as we loosened one and passed current through them and they attract each other. This generator never did operate as it should. By this we mean that moving the third brush did not change the charging rate. We have tested the cutout and ammeter and wiring on the car and they are all right. We reversed the field connections for armature wound wrong and still it will not charge. This generator will not motorize when connected to a battery. Please look over the diagram as I am sending this sketch to show how the generator is connected. The commutator has 28 segments and the armature is wound single reentrant and is also lap wound. —Vernon O. Westcope, Mt. Etna, Iowa.

WE are reproducing your sketch alongside of one that we have made which has been copied from a wiring manual. The sketch at the left is yours and the one at the right is ours. We are not sure that you have accurately copied the connections of the generator, but if you have done so, it would appear as if you have a four pole rocker ring installed in a two pole generator. In a two pole machine there is one north pole and one south pole. Accordingly, in the armature the voltage generated is such that on the commutator there is one positive point and one negative point. Accordingly, only two brushes are required as far as main brushes are concerned and they must be opposite each other. You will notice that the two main brushes you have shown are at 90 degrees, which would be correct for a four pole machine. It is possible that the machine has been repaired by some other shop and someone unfamiliar with electrical generators has made the mistake of installing four pole brush rigging in this two pole generator. On the other hand it is possible that your sketch is not exactly accurate and that you have reversed the connections of the third brush and the insulated main brush. The first thing to do is to see that your connections are made, as shown in the right hand sketch. The next thing to

do would be to lift the third brush and apply battery current to the insulated terminal and the frame of the machine and see that the armature draws from 15 to 20 amperes and has no appreciable tendency to turn in either direction. The next thing to do would be to drop the third brush and see that the machine rotates in the same direction that it would be driven if installed on the car. If you test the two field coils you should find that they draw 1.7 amperes when connected to a six volt battery. When the machine is running as a motor with the third brush touching the commutator the machine should draw 2.7 amperes at 6 volts. You mention having tested the armature with a growler and a test light. The test lamp if connected on 110 volts is suitable for testing for ground only, the two points being put on the armature shaft and commutator, respectively. A very good check on the armature, however, can be made by running as a motor. If the armature is shorted or grounded the rotation will be uneven and if the generator is laid on a bench while operating as a motor it will show considerable shake and vibration. The current also will be unsteady and if measured with an ammeter will make the needle of the ammeter vibrate back and forth. Usually if the field current seems to be about right and the machine will run in the right direction as



a motor but does not generate when driven faster in the same direction, it indicates armature trouble. If the machine runs in the wrong direction it requires reversing the field connections. This does not mean reversing the third brush and the main brush connection but it means to ground the lead from the field which formerly went to the third brush and to connect the field lead which was formerly grounded to the third brush. It may be that you have a reverse wound armature and in trying to correct the condition by reversing the field circuit you really interchanged the leads on the brushes by mistake.

## Better to Fix the Cone Clutch

I have a 1924 special Studebaker which has a cone clutch. I want to install a disk clutch. Can a disk clutch of later Studebaker design be installed? If so, tell me what changes to make and what clutch to use. Perhaps it would be better to use a later engine with this. Will the Special power plant of a later model work in this car? If it can be used let me know what changes are necessary. The engine I am using is absolutely O.K. except for the clutch. In shifting this gives me trouble. It is almost impossible to shift without clashing the gears. I can shift if I let the car coast awhile, but when going uphill and have to get in speed quickly, it cannot be done without clashing. Any information you can give me will surely be appreciated.—G. E. Shutt, 5410 Smiley Drive, Los Angeles, Calif.

WHILE it might be possible to install a different clutch in this car, the cost of parts and labor would exceed the present value of your car. This problem was talked over with the local factory branch of the Studebaker organization and we find that the cost would be so great that we did not even take the trouble to list the needed parts. You can get satisfactory service from your cone clutch if it is properly treated. In fact, a cone clutch in good condition will give you extremely smooth action. To put your clutch in good condition, block your clutch pedal out so as to expose the clutch lining. Inspect it carefully to see that it is not worn-out or burned and replace it if it is in bad condition. Assuming that it is in reasonably good condition, get a small quantity of neats foot oil and proceed to treat it. Never apply neats foot oil to the surface or hair side of the clutch leather. Working from the bottom of the car, pry the leather out from the cone. You can do this with a small screw driver. Then squirt neats foot oil in between the leather and the cone. In this way, proceed all the way around the clutch until the leather is thoroughly saturated. Then leave the clutch blocked out for at least 24 hours. Before putting the clutch into service, carefully wipe off surplus oil from the surface of the leather as this would cause slipping and burning. If you will take the time to do this work carefully we feel sure that the car will function to your satisfaction. Incidentally, we believe there is some mistake with regard to this car being a 1924 model as the cone clutch was discontinued several years before that.



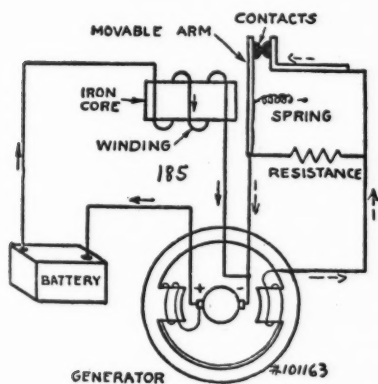
## [READERS' CLEARING HOUSE]

**Information on Generators**

Give me some information about automobile generators. As I understand it the amperage is controlled by the third brush or the vibrating regulator, but I do not understand how the voltage is controlled. Will you please enlighten me on this matter? Would also like to have you explain how thermostatic control works. My file of MOTOR AGE extends back about 18 months.—Anaheim Subscriber.

**B**RIEFLY, the third brush system of control depends on the action of the armature current in distorting the magnetism so that the shunt field is weakened. Of course, if the battery should be disconnected no armature current would flow and we would have no regulation. In nearly all systems the voltage control depends on the generator being connected to the battery, for the battery has a natural voltage which is very nearly constant, except that it rises somewhat as the battery becomes charged.

We are showing three illustrations, one of which gives the circuit for a current regulator, this being of the



Typical current regulator

vibrating type. Referring to this illustration it will be seen that field current goes from positive brush through the left coil, then through the right coil, then up to the regulating contacts and across them back to negative brush. The current which goes to battery goes from positive brush to the battery and in returning goes through a winding on an iron core.

As this current becomes stronger it attracts the movable arm and pulls the contacts open. When the contacts are open the field current must go through the resistance instead of through the contacts, which of course reduces the

value of the current and weakens the generator, for the generator output depends on the strength of the field magnetism. Then as soon as the output of the generator has been reduced the contacts will close again and this action will be repeated, resulting in a vibrating action of the contacts which regulates the current. This system is also dependent on the generator being connected to the battery, for if the circuit is broken there is no current flowing through the regulating winding on the iron core and consequently no regulation. With this system there is sometimes used a fine winding on the iron core which is connected directly to the generator brushes in which case the machine is regulated according to voltage to a greater or less extent. The three illustrations used are taken from a Remy service manual.

Referring now to the two illustrations which show the thermostatic control. This control is used in connection with third brush machines and is so connected that the third brush field current must flow through the thermostat. The thermostat itself is mounted inside the generator so as to be affected by the generator heat.

**They Changed This**

We are coming to you for help on a 93 Overland Six. The engine throws oil out around the crankshaft between the timing gear case and the fan pulley. When running on the road the fan will throw the oil out all over the right side of the car. The timing case has been removed and inspected and a new felt washer installed, but this did not help. One shop installed a new case but that helped some for 200 miles and then it was as bad as ever. A good set of rings have been installed so the blow-by is not excessive. Please send us your dope on this.—Robbins & Robbins, N. Main Street, Rockford, Ohio.

**T**HERE is, of course, a possibility that the breather on this car is clogged, but we suspect that you will have to go farther than that to remove the cause of your trouble. Since the model in question was produced there has been a change at the front end of the engine. The oil is now kept in the crankcase by means of a metal disk which fits over the front end of the crankshaft and deflects the oil so that it cannot work out through the front end cover. If you will see your nearest Overland dealer, or communicate direct-

ly with the factory, you will be able to get one of these disks for this car.

**Try Again**

About six weeks ago we overhauled a 26-60 Chrysler. We honed this job and fitted new pistons, pins and rings. The pistons were fitted with .003 clearance and the rings were given a .004 in. gap and the pistons were drilled in the oil ring groove. This job ran perfectly with the exception that it pumped oil. Any information on how to overcome the oil pumping will be greatly appreciated.—W. J. Noonan, 23157 Woodward Ave., Ferndale, Mich.

**W**E assume, of course, that in the honing of the cylinders you were careful to get the walls perfectly straight. A number of your dimensions for the fitting of the new parts are incorrect. We also note one other thing. The genuine Chrysler replacement pistons are already drilled for oil control, so we wonder what kind of piston you used in the job. The pistons should be fitted with a clearance of .0015 as measured on the skirt. Perfect Circle rings are original equipment and consists of a plain ring in the top groove, a wiper in the middle groove and an oil regulator ring in the lower groove. The plain ring should be fitted with an end clearance of .010 to .016. Both the wiper and regulator rings should have an end clearance of .006 to .010. It is entirely possible that your very small end clearance of .004 in. has permitted expansion which has scored the walls and damaged the rings, thus resulting in oil pumping. We feel certain that if you will check up on the condition of the walls and then refit such parts as may be needed, according to the dimensions given, that your troubles will be overcome.

**Essex 6 Timing**

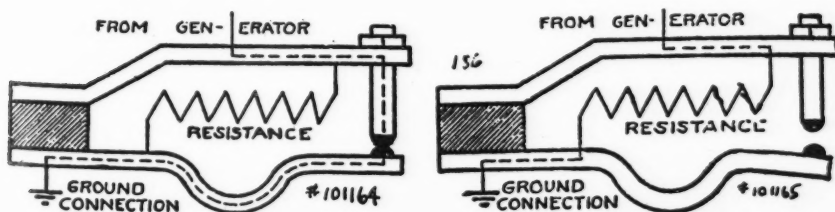
Kindly inform me at once as to the valve timing in degrees on an Essex six built in 1925.—H. L. Andrews, Box 212, Burke, S. Dak.

**T**HE inlet opens 7 deg. after top center and the exhaust closes 8 deg. after top center.

**Rear Axle Backlash**

What is the proper backlash between the pinion and ring gear in all of the different Willys-Knight and Overland cars?—L. Vilatts, Salem, Ore.

**A**LL ring gears and pinions when new should be set so that they have .005 in. backlash. Then when they are so set the ring gears should be rotated at the tightest point. When the tightest point or high spot of the ring gear is located, set this particular point at a clearance of .0015 in. backlash and the adjustment will be correct for all of the different cars that you have mentioned.



Remy thermostat in closed and open position

## READERS' CLEARING HOUSE

### Ford Generator Speed

I am equipping a number of tractors with Ford generators of the Model T variety, for lighting purposes and would like to know at what speed they should turn for maximum output. I have asked several mechanics this question and have received as many different answers, so I am writing you to get the low-down on the matter.—J. C. Cowan, Jr., Tulia, Texas.

**T**HE Model T Ford generator is designed to deliver a maximum of 12.5 amp. at 1700 r.p.m.

Is there any way I can hook up this lighting plant without using a battery? It looks to me as if there should be a way to put a resistance in the circuit to take care of the excessive juice and prevent burning out the light bulbs.

There is no practical way of using this generator without a battery, especially on a machine on which the speed will vary, as it does in tractors.

### It Can't Be Done

We are herewith quoting a specification taken from your August 16th issue and wonder if you will be so kind as to furnish us with the maximum speed that this car makes and give us the formula used for figuring it.

Gear ratio—4.41 to 1

H.P. Rating—55 at 2700 r.p.m.

Tire size—28 x 5.25

Engine size—3 3/16 by 3 1/2

Car—Oldsmobile, Model F28.

—Franklin Garage Co., Franklin, Pa.

**W**IND resistance, load, chassis friction and other factors would have to be taken into consideration in calculating the speed that this car makes. However, if you can actually turn up 2700 r.p.m. with the engine, we would show you how to figure the speed at which the car would then be traveling, neglecting, of course, the relatively small slippage between the tires and road. Dividing 2700 engine r.p.m. by your rear axle ratio of 4.41 will give us 612 wheel revolutions per minute. According to specifications your tire has a diameter of 28 in. This multiplied by 3.1416 will give the circumference or the distance that the car will travel in one revolution. This is 87.96, or for all practical purposes, 88 in. Multiplying this by 612, the revolutions per minute, gives 53,856 in., which is 4488 ft. As there are 5280 ft. in a mile and as the car under consideration travels 4480 ft. in a minute, we will divide the latter distance by the number of feet in a mile and find that it goes .84 times. As the r.p.m.'s given on the engine are for one minute the distance traveled was covered in one minute and therefore, the speed at which the car is running would be .84 of 60 (miles per hour) or 50.4 miles per hour. One thing we wish to point

out in this calculation is that while the brake horsepower rating is given as 55 at 2700 r.p.m., it is quite possible that the engine can turn up much faster than this, but in doing so it probably shows a loss in horsepower. In other words, there is every reason to believe that the car can exceed the speed given by a considerable margin, so one should not take specifications as determining conclusively the speed at which a car can travel.

### Check Your Cam Bearing for Oil Leak

We are having trouble with an advanced Nash, 1926 model with engine No. 235512. This car is losing oil through the rear main bearing. The bearing is a perfect fit. We have tried piping the oil back with a copper tube from the drain groove to the bottom of the pan, but with no results. We would greatly appreciate some help on this.—Wilhelm Auto Service, Gillette, Wyo.

**W**E are practically certain that your trouble is not due to oil leaking through the rear main bearing. The oil is in all probability coming from the rear camshaft bearing and is running down and dripping from the main bearing, thus giving the appearance of a rear main bearing leak. There is a new type replacement camshaft bearing which is available through Nash dealers. We would suggest that you get one of these and install it, for that is about the only way of overcoming this trouble.

### Argument Over the Properties of Ethyl

We are having a little dispute on the subject of Ethyl gas. I am writing in regard to this and would appreciate very much if you would give us information as to whether this is a gas that is refined, or whether it is merely a coloring put into any gas, and does it give more miles or more power?—G. W. Lackey, Fowler, Colo.

**I**T would be our suggestion that you get a very interesting booklet on the subject of Ethyl gasoline from the Ethyl Gasoline Corp., 25 Broadway, New York City. This will be sent free to anyone upon request. This booklet will explain in detail just what Ethyl is and what it does. Briefly, the coloring identifies it. Its action reduces the tendency of an engine to detonate and therefore, enables the use of higher compression. By using higher compression it is possible to get more power and mileage from an engine, so you will see that in this way, when Ethyl is used in the correct kind of powerplant, that it does deliver more power and more mileage. The booklet will give the full details.

### Don't Oil the Brake Lining on a Car

I have in my care a 1928 model Pontiac. The foot brakes on this car squeak very much at times. One of the first class service stations in this vicinity recommends that neats foot oil be put on the brake lining, claiming that this will stop the squeak. In your opinion is neats foot oil better than some of the preparations made by the trade for that purpose?—Edwin Ulrich, Winside, Nebraska.

**T**HERE is no doubt that neats foot oil would stop the squeak, but with its use you will probably find that the brake will not stop the car. The preparations put on the market for the purpose of silencing brakes will probably be much safer to use than the oil. The subject of squealing brakes was very thoroughly gone into in the Clearing House section of MOTOR AGE for Aug. 16 and we would suggest that you refer to that issue, as you will find it helpful.

### Worn Grooves Let Oil Into Combustion Chamber

I have a Chrysler-70 roadster driven 20,000 miles. The car was running nicely except for increasing gas and oil consumption and I noticed smoke coming from the exhaust pipe. I put in some well-known rings, together with an oil ring at the lowest groove, ground the valves and drove slowly for about 900 miles. I can notice some decrease in gas consumption, but the car still smokes and uses one quart of oil every 150 miles. Do I have to use special rings in this engine, or will it stop oil pumping when the rings I put in are worn in? If so, how many miles have I to drive the car to wear the rings in properly?—H. Yoshida, 554 F St., Fresno, Calif.

**C**ERTAINLY if conditions are at all right in your car your rings should be well seated long before 900 miles. We suspect that the grooves in the pistons are slightly worn permitting the new ring to work up and down. This would allow oil to pass by into the combustion chamber which would account for your continued smoking and continued high oil consumption. The Chrysler organization recommends servicing these cars with the same make of piston rings with which they are originally equipped. These are Perfect Circles. The recommended installation and fit includes a plain ring in the top groove with an end clearance of .010 to .016, a wiper in the second groove and a regulator ring in the third groove, both of these being fitted with an end clearance of .006 to .010 in. However, if these rings are free to move up and down in the piston ring grooves, they will not prevent the excessive oil consumption which is now troubling you.



# Prices, Weights and Equipment of Current Passenger Car Models

Important changes in Specifications and Price Tables since last issue:

## DODGE "Senior"

Prices and Body Models

## Stearns Knight "De Luxe H"

Prices

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
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### AUBURN

2-4p. Roadster...	\$1195	3	2980	aeghmnrw
5p. Touring...	1195	4	3070	aeghmnrw
4p. Cabriolet...	1395	2	3125	aeghmnrw
5p. Sp. Sedan...	1295	4	3300	aeghmnrw
5p. Sedan...	1395	4	3300	aeghmnrw
2-4p. Roadster...	1495	3	3265	aeghmnrw
2p. Speedster...	1695	2	3245	aeghmnrw
5p. Touring...	1495	4	3380	aeghmnrw
4p. Cabriolet...	1695	2	3410	aeghmnrw
5p. Phaeton Sed.	1895	4	3600	aeghmnrw
5p. Sp. Sedan...	1595	4	3590	aeghmnrw
5p. Sedan...	1695	4	3590	aeghmnrw
2-4p. Roadster...	1995	3	3655	aeghmnrw
2p. Speedster...	2195	2	3590	aeghmnrw
5p. Touring...	1995	4	3655	aeghmnrw
7p. Touring...	1995	4	3655	aeghmnrw
2-4p. Cabriolet...	2195	2	3880	aeghmnrw
5p. Phaeton Sed.	2395	4	3990	aeghmnrw
5p. Sp. Sedan...	2095	4	3995	aeghmnrw
5p. Sedan...	2195	4	3995	aeghmnrw
7p. Sedan...	2195	4	3995	aeghmnrw

### BUICK

5p. Phaeton...	\$1225	4	...	ag
2p. Bus Coupe...	1195	2	...	ag
5p. Sedan 2d...	1220	2	...	agt
5p. Sedan 4d...	1320	4	...	agt

### "121"

4p. Sp. Roadster...	1325	...	...	aghm
3p. Bus Coupe...	1395	...	...	aghm
4p. Spec. Coupe...	1450	...	...	aghm
5p. C. C. Sedan...	1450	...	...	aghmnt
5p. Sedan...	1520	4	...	aghmnt

### "129"

5p. Phaeton...	1525	4	...	aghm
7p. Touring...	1550	4	...	aghm
5p. Coupe...	1865	...	...	aghm
5p. C. C. Sedan...	1875	...	...	aghmnt
4p. Conv't. Cpe...	1875	...	...	aghm
5p. Sedan 4d...	1935	4	...	aghmnt
7p. Sedan...	2045	4	...	aghmnt
7p. Limousine...	2145	4	...	aghmnt

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
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### CADILLAC "341"

2p. Roadster...	\$3350	2	4590	aeghmnrpx
4p. Phaeton...	3450	4	4640	aeghmnrpx
4p. Sp. Phaeton...	3950	4	5125	Beghikmnp
7p. Touring...	3450	4	4630	aeghmnrpx
2-4p. Coupe...	3295	2	4820	aeghmnrpx
2-4p. Conv. Coupe...	3595	2	4665	aeghmnrpx
5p. Coupe...	3595	2	4760	aeghmnrpx
5p. Sedan...	3695	4	4880	aeghmnrpx
5p. Town Sedan...	3495	4	4875	aeghmnrpx
7p. Sedan...	3795	4	4965	aeghmnrpx
7p. Imp. Sedan...	3745	4	4925	aeghmnrpx
7p. Imp. Sedan...	3995	4	5025	aeghmnrpx
5p. Imperial Cab...	3745	4	4925	aeghmnrpx
7p. Imperial Cab...	3895	4	5025	aeghmnrpx
5p. Sedan...	\$4195	4	4995	aeghmnrpx
5p. Sedan Cab...	4195	4	4995	aeghmnrpx
7p. Sedan...	4295	4	5080	aeghmnrpx
7p. Sedan Cab...	4195	4	5080	aeghmnrpx
5p. Imperial...	4345	4	5035	aeghmnrpx
7p. Imperial Cab...	4345	4	5035	aeghmnrpx
7p. Imperial...	4345	4	5135	aeghmnrpx
7p. Imperial Cab...	4445	4	5135	aeghmnrpx
5p. Club Cab't...	4395	...	...	...
5p. Phaeton Sed.	5750	...	...	...
5p. Im. Pha. Sed.	5995	...	...	...
5p. Town Cab Con.	5250	4	...	aeghmnrpx
5p. Town Cab Con.	5500	4	...	aeghmnrpx
5p. Lim Bro m Con.	5500	4	...	aeghmnrpx

### CHANDLER

5p. Touring...	\$ 895	4	...	ahmn
5p. Sportster...	995	2	...	ahmn
3p. Coupe...	875	2	...	ahmn
5p. Sedan...	895	4	...	ahmn
2-4p. Coupe...	955	2	...	ahmn
5p. DeL. Sedan...	995	4	...	ahmn
2-4p. Cabriolet...	1075	2	...	ahmn
5p. Sedan, 2d...	1295	2	...	...
4p. Coupe...	1295	...	...	...
5p. Sedan, 4d...	1395	4	...	...
5p. DeL. Sedan...	1495	4	...	...
7p. Touring...	1725	4	3360	ahjlmnw
5p. Met. Sedan...	1525	4	3800	ahmnt
4p. Coupe...	1725	2	3535	ahmnt
3p. Ctry. Club...	1725	2	3535	ahmnt
5p. Royal Sedan...	1725	4	3800	ahjlmnw
3-5p. Cabriolet...	1825	2	3450	ahmnt
7p. Sedan...	1925	4	3895	ahmnt
5p. Berline Sed.	2025	...	...	...
7p. Touring...	1995	4	3655	ahjlmnwpx
4p. Coupe...	1925	2	3640	ahmnt
4p. Ctry. Club...	1925	2	3640	ahmnt
5p. Sedan...	1795	4	3900	ahmnt
7p. Sedan...	2195	4	3950	ahmnt
3-5p. Cabriolet...	2095	2	3600	ahmnt
5p. DeL. Sedan...	1995	4	4005	Bhilmnpx
5p. Berline Sed.	2295	...	...	...

### "Royal 75"

5p. Sedan, 2d...	1295	2	...	...
4p. Coupe...	1295	...	...	...
5p. Sedan, 4d...	1395	4	...	...
5p. DeL. Sedan...	1495	4	...	...

### "Big Six"

7p. Touring...	1725	4	3360	ahjlmnw
5p. Met. Sedan...	1525	4	3800	ahmnt
4p. Coupe...	1725	2	3535	ahmnt
3p. Ctry. Club...	1725	2	3535	ahmnt
5p. Royal Sedan...	1725	4	3800	ahjlmnw
3-5p. Cabriolet...	1825	2	3450	ahmnt
7p. Sedan...	1925	4	3895	ahmnt
5p. Berline Sed.	2025	...	...	...
7p. Touring...	1995	4	3655	ahjlmnwpx
4p. Coupe...	1925	2	3640	ahmnt
4p. Ctry. Club...	1925	2	3640	ahmnt
5p. Sedan...	1795	4	3900	ahmnt
7p. Sedan...	2195	4	3950	ahmnt
3-5p. Cabriolet...	2095	2	3600	ahmnt
5p. DeL. Sedan...	1995	4	4005	Bhilmnpx
5p. Berline Sed.	2295	...	...	...

### CHEVROLET

2p. Roadster...	\$495	2	2030	dr
5p. Touring...	495	4	2090	dr
5p. Coach...	585	2	2360	dhr
2p. Coupe...	595	2	2235	dhr
5p. Sedan...	675	4	2435	dhr
2-4p. Con. Sp. Cab...	695	2	2265	dhr
5p. Imperial...	715	4	2405	dhr

### CHRYSLER

2-4p. Roadster...	\$1065	2	2730	agmn
5p. Touring...	1075	4	2770	agmn
2p. Bus Coupe...	1040	2	2780	agmn
5p. Sedan, 2d...	1065	2	2905	agmn
5p. Sedan, 4d...	1145	4	2960	agmn
2-4p. Coupe...	1145	2	2875	agmn
2-4p. Roadster...	1555	2	3190	aeghm
2-4p. Coupe...	1535	2	3235	aeghm
5p. Royal Sedan...	1535	...	3340	aeghm
4-5p. Town Sedan...	1655	...	3360	aeghm
2-4p. Roadster...	\$2795	3	3870	aeghmnrwx
5p. Sedan...	2945	4	4125	aeghmnrpx
7p. Sedan...	3075	4	4250	aeghmnrpx
5p. Town Sedan...	2995	4	4140	aeghmnrpx
7p. Sedan Lim...	3495	4	4285	aeghmnrpx

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
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### CUNNINGHAM

4p. Sp. Touring...	\$6500	4	4500	Ceghiklmnp
7p. Touring...	7000	4	4600	Ceghiklmnp
4p. Coupe...	8000	2	4700	Ceghiklmnp
6p. Limousine...	8500	4	5000	Ceghiklmnp
4p. Polo Rdster...	\$1795	2	3295	aeghmnr
5p. Touring...	1795	4	3325	aeghmnr
4p. Coupe...	1865	2	3345	aeghmnr
5p. Emp. Sedan...	1885	4	3475	aeghmnr

### DAVIS "99"

4p. Polo Rdster...	\$1795	2	3295	aeghmnr
5p. Touring...	1795	4	3325	aeghmnr
4p. Coupe...	1865	2	3345	aeghmnr
5p. Emp. Sedan...	1885	4	3475	aeghmnr

### DE SOTO

2-4p. Roadster...	\$345	2	2445	ghnw
5p. Phaeton...	845	4	2445	ghn
2p. Bus. Coupe...	845	2	2465	ghn
2-4p. Coupe DeLu...	845	2	2580	ghn
5p. Sedan...	845	4	2640	ghn
5p. Sedan...	885	4	2640	ghn
5p. Sedan DeLujo...	...	...	...	...

### DIANA "St. 8"

5p. Phaeton...	\$1695	4	3100	agmn
5p. Roy. Rdster...	1795	2	2995	agmnw
5p. P.B. Rdster...	1895	2	2995	Bgmnw
5p. Cab. Rdster...	1995	2	3160	agmn
5p. Collap. Rdstr...	2195	2	3160	agmn
5p. 2d. Sedan...	1795	2	3170	aghmno
5p. 4d. Sedan...	2095	4	3275	aghmno

### DODGE BROS.

2-4p. Conv't Cab...	\$945	2	2570	Bghr
2p. Coupe...	875	2	2490	aghr
5p. Sedan...	895	4	2710	aghr
5p. Sedan DeL...	970	4	2780	aghr
5p. Sp. Sed. DeL...	1045	4	...	Beghikr
5p. Touring...	995	4	2775	aghmnr
5p. Sp. Touring...	1245	4	...	Beghikmnr
4p. Sp. Roadster...	1245	2	...	Beghikmnr
2p. Coupe...	1045	2	2650	aghmnr
4p. Coupe DeL...	1170	2	2850	Beghikmnr
5p. Sedan...	1095	4	2855	aghmnr
4p. Brougham...	1095	2	2750	aghmnr
4p. DeL. Bro'm...	1170	2	2850	Beghikmnr
5p. DeL. Sedan...	1170	4	2955	aghmnr
5p. Sp. Sedan...	1295	4	3150	Beghikmnr
5p. Vic. Bro'm...	1575	2	...	agmnp
5p. Sedan...	1675	4	...	agmnp
2-4p. Coupe...	1675	...	...	agmnp
5p. Sport Sed...	1795	4	...	Bgikmnp
2-4p. Sp. Coupe...	1795	2	...	Bgikmnp
5p. Landau Sed...	1845	...	...	Bgikmnp

### du PONT "E"

4p. Roadster...	\$2800	...	3700	afghikmnp
5p. Touring...	2800	4	3850	afghikmnp
4p. Coupe...	3200	...	3850	afghikmnp
4p. Conv't Coupe...	3400	2	3400	afghikmnp
5p. Sedan...	3400	...	4100	afghikmnp
5p. Con. Sedan...	3750	4	4100	Bfghikmnp

### "141 W.B."

4p. Roadster...	\$4390	...	...	Beghikprx
5p. Phaeton...	4590	...	...	Beghikprx
7p. Touring...	4590	...	...	aeghikprx
5p. Conv. Coupe...	4390	...	...	aeghikprx
5p. Sedan...	4410	...	...	aeghikprx
5p. Victoria...	4410	...	...	aeghikprx
5p. Limousine...	4675	...	...	aeghikprx
7p. Sedan...	4675	...	...	aeghikprx
7p. Limousine...	4875	...	...	aeghikprx
5p. Conv. Sedan...	5150	...	...	Beghikprx
5p. Town Cab...	5750	...	...	aeghikprx

### DURANT

4p. Roadster...	\$595	...	1950	ah
5p. Coupe...	595	...	2185	ah
5p. Sedan...	595	...	2230	ah
5p. Sedan...	695	...	2480	ah
2-4p. Conv. Cab...	...	...	2210	ahr

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
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### "55"

2p. Coupe...	795	...	239	uh
5p. Sedan...	795	...	239	uh
5p. Brougham...	895	...	24	uh
5p. Touring...	795	4	2385	aghm
2-4p. Sp. Rdster...	1025	2	2385	Beghikm
2-4p. Collap. Cab...	\$1045	2	2525	aghm
2-4p. Coupe...	975	2	2425	aghm
5p. Sedan...	975	2	2600	aghm
5p. Sedan...	1075	4	2675	aghm
5p. Brougham...	1175	4	2695	Beghikm
5p. Sedan...	1385	4	3130	aghm
5p. Brougham...	1550	4	3180	Beghikm

## Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight	Standard Equipment
<b>GARDNER</b>					<b>HUPMOBILE</b>					<b>LINCOLN</b>					<b>MARMON</b>				
<b>"120"</b>					<b>"Century 6"</b>					<b>"8"</b>					<b>"68"</b>				
4p. Roadster	\$1395	2	2995	aghnrr	5p. Phaeton	\$1425	2	2900	aghnrr	2p. Spt. Rdstr.	\$4600	2	4930	aegiklnprx	2-4p. Roadster	\$1565	2	2700	ahmnrw
5p. Sedan	1595			aghnrr	2-4p. Sportster	1435	2	2820	aghnrr	2-4p. Club Rdstr.	4600		5010	aeghiklnprx	5p. Sedan	1465	4	2897	ahmnr
Cabriolet	1495			aghnrr	7p. Phaeton	1455	4	2955	aghnrr	7p. Spt. Touring	4600	4	4940	aegiklnprx	5p. Vic. Coupe	1520	2	2887	ahmnr
Sport Sedan	1295			aghnrr	5p. Sedan 2d.	1345	2	2975	aghnrr	4p. Spt. Phaeton	4600	4	4910	begiklnprwx	2-4p. Coupe	1465	2	2827	ahmnr
<b>"125"</b>					<b>"Century 8"</b>					<b>"E-75"</b>					<b>"78"</b>				
4p. Roadster	1895	2	3040	aeghmnp	4p. Coupe	1345	2	2965	aghnrr	4p. Coupe	4600	2	4805	aegiklnprx	2-4p. Roadster	1965	2	3007	ahlmnpvrx
Cabriolet	1795			aeghmnp	5p. Sedan	1395	4	3040	aghnrr	4p. Sedan	4800	4	4930	aegiklnprx	2-4p. Coupe	1965	2	3097	ahlmnpvrx
5p. Brougham	1875	4	3360	aeghmnp	2-4p. Cabriolet	1475	2	2965	aghnrr	5p. Sedan	4800	4	5010	aeghiklnprtx	4p. Vic. Coupe	2065	2	3066	ahlmnpvrx
5p. Sedan	1895	4	3380	aeghmnp	"Century 8"	1905		3285	aghmnp	2p. Coupe	5000		4720	aeghiklnprtx	5p. Sedan	1965	4	3104	ahlmnpvrx
Victoria	1895			aeghmnp	2-4p. Sportster	1915		3335	aghmnp	7p. Limousine	5200		5165	aeghiklnprtx	<b>"E-75"</b>				
<b>"130"</b>					7p. Phaeton	1935		3355	aghmnp	4p. Berline	5500		5115	aeghiklnprtx	2p. Speedster	3485	2	4251	aeghiklnprx
2-4p. Roadster	2195		3440	aeghmnpvrx	5p. Sedan 2d.	1825	2	3385	aghmnp	7p. Limousine	6000		5380	aeghiklnprx	4p. Speedster	3485	2	4256	aeghiklnprx
Cabriolet	2295			aeghmnpvrx	4p. Coupe	1865		3375	aghmnp	7p. Brougham	6500		5205	aeghiklnprx	5p. Phaeton	3485	4	4017	aeghiklnprx
5p. Brougham	2375	4	3750	aeghmnpvrx	5p. Sedan 4d.	1875	4	3455	aghmnp	6p. Ber. Landau	6500		5140	aeghiklnprx	7p. Tour. Speed	3565	4	4480	aeghiklnprx
5p. Sedan	2395	4	3790	aeghmnpvrx	2-4p. Cabriolet	1955		3345	aghmnp	7p. Cabriolet	6600		5160	aeghiklnprx	2p. Coupe Rdstr.	3565	2	4374	aeghiklnprx
Victoria	2395			aeghmnpvrx						7p. Le Baron Cab	7000		5200	aeghiklnprx	5p. Town Coupe	3195	2	4452	aeghiklnprx
										7p. Holbrook Cab	7200		5280	aeghiklnprx	2p. Coupe	3485	2	4373	aeghiklnprx
										7p. Collap. Cab	7300		5140	aeghiklnprx	4p. Victoria	3485	2	4346	aeghiklnprx
															5p. Brougham	3565	4	4525	aeghiklnprx
															5p. Sedan	3565	4	4498	aeghiklnprx
															7p. Sedan	3960	4	4620	aeghiklnprx
															5p. Cus. Sedan	4075	4	4515	aeghiklnprx
															7p. Cus. Sedan	4075	4	4678	aeghiklnprx
															7p. Cus. Limou.	4175	4	4718	aeghiklnprx

### KEY TO SYMBOLS

\*—Italic figures denote shipping weight.

A — Wood wheels with spare.

• - Wood wheels.

B - Wire wheels with spare.  
C - Wire wheels

b - Wire wheels.  
c - Optional wheels.

C = Optional wheels with spare:

c - Type of wheels optional

D - Disk wheels with spare.

d - Disk wheels.

- Front and rear bumpers.

f - Front bumper.

g - Shock absorbers or snubbers.

#### h -Automatic windshield wiper.

:—Trunk and trunk rest.

i—Trunk rack, no trunk.

k—Spare tire.

1 - Spare tire lock

m - Engine heat indicator.

n - Dash gasoline gauge.

—Gas heater

●—Car heater.  
■—Cigar lighter.

r - Rear traffic signal.

■ -Spotlight.

t - Vanity and smoking set;

- -Smoking set

—Vanity set

v—Vanity set;  
w—Windshield wiper

x—Clock.

†—Overall length.

§ — Prices on application.



## Prices, Weights and Equipment of Current Passenger Car Models

Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment	Passengers and Model	F.O.B. Price	Doors	Net Weight*	Standard Equipment
4p. Sp. Rdster... \$1075	2	2730	aeghjn		"8-69"					"8-88"					131" W.B.				
2-4p. Cabriolet... 1155	2	2825	aghn		5p. Coupe... \$2345	3	3905	Deghlmrntx		5p. Tourer... \$2495	4	3650	cg		7p. State Tour... \$2485	4	4125	Bghjklmnp	
5p. 2d. Sedan... 1045	2	2890	aghn		2-4p. Roadster... 2245	2	3710	Deghlmrntx		2-4p. Roadster... 2750	2	3540			7p. Sedan... 2085	4	4120	aghlmnp	
3p. Land. Coupe... 1045	2	2890	aghn		5p. Sedan... 2345	4	3875	Deghlmrntx		2p. Speedster... 2985	2	2875			4p. Cabriolet... 2250	2	4030	Bghjklmnp	
5p. 4d. Sedan... 1145	4	2980	aghn		7p. Sedan... 2545	4	3975	Deghlmrntx		5p. Sedan... 2985	4	3880	cg		5p. State Sedan... 2250	4	4250	Bghjklmnp	
5p. Land. Sedan... 1265	4	3050	aghn		7p. Limousine... 2645	4	4200	Deghlmrntx		7p. Sedan... 3285	4	3980	cg		7p. State Sedan... 2350	4	4310	Bghjklmnp	
OLDSMOBILE					PIERCE-ARROW					ROLLS ROYCE					7p. Limousine... 2450	4	4395	Bghjklmnp	
"F-28"					"81"					"Si. Ghost"					STUTZ "BB"				
5p. Sp. Roadster... \$995	2	2650	ceghmnr		2p. Runabout... \$2600	2	3350	afghlmnr		Open Models... Bghjklmnp				"Custom"					
5p. Sp. Touring... 995	2	2640	ceghmnr		4p. Touring... 2700	4	3365	afghlmnr		Closed Models... Bghjklmnp				131" W.B.					
2p. Coupe... 925	2	2650	ceghmnr		7p. Touring... 2850	4	3500	afghlmnr		"New Phan"				2p. Speedster... \$3495	2	4478	aefghlmnr		
5p. Sedan, 2d... 925	2	2785	ceghmnr		5p. Club Bro'm... 2475	2	3540	afghlmnr		Open Models... Bghjklmnp				4p. Speedster... 3595	4	4509	aefghlmnr		
2-4p. Spt. Coupe... 995	2	2680	ceghmnr		2p. Coupe metal... 2650	2	3460	afghlmnr		Closed Models... Bghjklmnp				4p. Speedster... 3845	4	4600	aefghlmnr		
5p. Sedan, 4d... 1025	4	2860	ceghmnr		5p. Brougham... 3250	2	3540	afghlmnr		STEARN-KNIGHT				2p. Black Hawk... 4895	2	4302	ceghlmnr		
5p. Landau Sed... 1085	2	2855	ceghmnr		2p. Coupe leath... 2650	2	3490	afghlmnr		"Series 80"				4p. Black Hawk... 4945	2	4479	aefghlmnr		
"Deluxe Series"					5p. Club Sedan... 2750	4	3635	afghlmnr		126" W.B.				2p. Coupe... 3495	2	4449	aefghlmnr		
5p. Phaeton... 1145	4		Bjk		2-4p. Coupe met... 2750	2	3530	afghlmnr		2-4. Cab. Rdstr... \$2495	2			4p. Vic. Coupe... 3495	2	4479	aefghlmnr		
5p. Roadster... 1145	4		Bjk		5p. Sedan... 2750	4	3605	afghlmnr		5p. C.C. Sedan... 2495	4			5p. Coupe... 3545	2	4769	aefghlmnr		
5p. Sport Coupe... 1175	4		Bjk		2-4p. Coupe lea... 2750	2	3560	afghlmnr		5p. Sedan... 2495	4			5p. Sedan... 3570	2	4769	aefghlmnr		
5p. Landau Sed... 1235	4		Bjk		2p. Con't Cpe... 2850	2	3455	afghlmnr		5p. Brougham... 3570	4			5p. Collap. Lim... 4095	2	4520	aefghlmnr		
OVERLAND					7p. Club Land... 2850	4	3640	afghlmnr		2p. Cab. Coupe... 3695	2			7p. Speedster... 3895	4	4748	aefghlmnr		
"4" Whippet					7p. Sedan... 2850	4	3700	afghlmnr		7p. Limousine... 2945	4			7p. Sedan... 3895	4	5018	aefghlmnr		
5p. Touring... \$455	4	1985	agr		4p. Coupe... 2950	2	3490	afghlmnr		4p. Roadster... 3250	2	4252	aefghlmnr	145" W.B.					
2-4p. Roadster... 525	2	1932	agr		2p. Enc. Dr. Lim... 2950	2	3525	afghlmnr		4p. Touring... 3250	4	4322	aefghlmnr	7p. Sedan... 3895	4	5018	aefghlmnr		
2p. Coupe... 535	2	2060	aghr		5p. Sedan Land... 3550	4	3605	afghlmnr		4p. Cab. Rdstr... 3550	2	4500	aefghlmnr	7p. Sedan Lim... 3995	4	5159	aefghlmnr		
2-4p. Coupe Cab... 595	2	2122	aghr		7p. Sed. Landau... 3700	4	3700	afghlmnr		5p. Cus. Sedan... 3350	4	4562	aefghlmnr	5p. Collap. Sed... 3995	5	5020	aefghlmnr		
5p. Coach... 535	2	2160	aghr		5p. Enc. Dr. Land... 3800	4	3755	afghlmnr		4p. Coupe... 3450	2	4527	aefghlmnr	5p. Collap. Lim... 4195	5	5030	aefghlmnr		
5p. Sedan... 610	4	2210	aghr		5p. Opera Bro'm... 7000	4	3755	afghlmnr		5p. Std. Sedan... 3450	4	4572	aefghlmnr	"Weyman-Cas."					
"6" Whippet					2p. Runabout... 5875	2	4560	afghlr		5p. Sedan Lim... 3700	4	4647	aefghlmnr	131" W.B.					
2-4p. Roadster... 685	2	2228	agr		4p. Touring... 5875	4	4510	afghlr		5p. Cus. Sed. Lim... 3700	4	4637	aefghlmnr	2p. Black Hawk... 4895	2	4302	ceghlmnr		
5p. Touring... 615	4		agr		7p. Lim. Enel... 5875	4	4815	afghlr		7p. Sedan... 3750	4	4702	aefghlmnr	5p. Sedan... 4120	4	4393	aefghlmnr		
2-4p. Coupe... 685	2	2356	aghr		3p. Coupe... 6375	2	4760	afghlr		7p. Sedan Lim... 3950	4	4777	aefghlmnr	4p. Sedan... 4120	2	4393	aefghlmnr		
5p. Coach... 695	2	2423	aghr		4p. Cpe. Sedan... 6375	2	4795	afghlr		4p. Cab. Rdstr... 5500	2			4p. Coupe... 4120	2		aefghlmnr		
5p. Sedan... 770	4	2484	aghr		4p. Sedan... 6375	4	4830	afghlr		5p. Sedan... 5500	2			5p. Landau Sed... 4420	4		aefghlmnr		
IAC CARD					7p. Enc. Dr. Lan... 6000	4	4895	afghlr		7p. Touring... 5500	4	4872	afghlmnr	5p. Sedan... 4495	4		aefghlmnr		
"Std. 8"					7p. Lim. Enel... 6000	4	4840	afghlr		4p. Cab. Rdstr... 5500	2			5p. Sedan... 4545	4		aefghlmnr		
126 W.B.					4p. C. C. Sedan... 6475	4	4805	afghlr		5p. Coupe... 5500	2			7p. Sedan... 4745	4		aefghlmnr		
5p. Sedan... \$2435	4	4185	dgmnp		2p. Coupe... 6600	2	4745	afghlr		5p. Sedan... 5500	2			7p. Limousine... 4995	4	4778	aefghlmnr		
2-4p. Coupe... 2510	2	4100	dgmnp		4p. Sedan Land... 6600	4	4795	afghlr		5p. Sedan... 5500	2			7p. Landau Lim... 5295	4		aefghlmnr		
2-4p. Con. Coupe... 2585	2	4020	dgmnp		4p. Enc. Dr. Land... 6600	4	4880	afghlr		7p. Sedan... 5500	4	4872	afghlmnr	"Salon Cus."					
"Std. 8"					7p. Fr. Limou... 7500	4	4740	afghlr		7p. Sedan... 5500	4	4872	afghlmnr	5p. PW Sedan... 6345	4		aefghlmnr		
133" W.B.					7p. Fr. Landau... 8000	4	4865	afghlr		7p. Sedan Lim... 3950	4	4777	aefghlmnr	7p. PW Sedan... 6345	4	5014	aefghlmnr		
2-4p. Runabout... \$2535	2	3905	dgmnp		PLYMOUTH					7p. Con. T'n Car... 6895	4	5044	aefghlmnr	7p. Con. T'n Car... 6895	4	5044	aefghlmnr		
5p. Phaeton... 2535	4	3905	dgmnp		2-4p. Roadster... \$675	2	2160	ah		"De Luxe H"				5p. Touring... \$995	2	2525	aefghlmnr		
7p. Touring... 2635	4	3950	dgmnp		5p. Touring... 695	4	2255	ah		4p. Cab. Rdstr... 5500	2			5p. Sedan... 1115	2	3020	aefghlmnr		
4p. Coupe... 2735	2	4225	dgmnp		2p. Coupe... 685	2	2295	ah		5p. Coupe... 5500	2			5p. Coupe... 1165	2	2932	aefghlmnr		
5p. Club Sedan... 2735	2	4225	dgmnp		5p. Sedan, 2d... 700	2	2435	ah		5p. Sedan... 5500	2			5p. Sedan... 1165	4	3076	aefghlmnr		
7p. Sedan... 2735	4	4440	dgmnp		2-4p. Del. Coupe... 735	2	2435	ah		"De Luxe J"				5p. Metro Sedan... 1195	2	3090	aefghlmnr		
7p. Sedan Lim... 2835	4	4475	dgmnp		5p. Sedan, 4d... 735	4	2460	ah		7p. Touring... 5500	4	4872	afghlmnr	5p. Metro Sedan... 1285	4	3100	aefghlmnr		
"640"					PONTIAC "6"					7p. Limousine... 5800	4	5217	afghlmnr	2-4p. Metro Cpe... 1265	2	2980	aefghlmnr		
2-4p. Runabout... \$3175	2				2-4p. Roadster... \$745	2	2270	ahn		"G8-85"				5p. Spec. Sedan... 1585	4	3300	aefghlmnr		
5p. Phaeton... 3175	4				5p. Sp. Phaeton... 775	4	2425	ahn		4p. Roadster... 3950	2	4448	aefghlmnr	5p. Royal Sedan... 1635	4	3310	aefghlmnr		
7p. Touring... 3275	4				2p. Coupe... 745	2	2435	ahn		4p. Touring... 3950	4	4633	aefghlmnr	5p. Coupe... 1635	2	3230	aefghlmnr		
2p. Coupe... 3250	2				5p. 2d. Sedan... 745	2	2520	ahn		4p. Cabriolet... 4550	2	4717	aefghlmnr	"8-85"					
2-4p. Conv. Cpe... 3350	2				4p. Sport Cab... 795	2	2455	ahn		4p. Coupe... 4550	2	4882	aefghlmnr	5p. Club Phaeton... 1710	4		aefghlmnr		
5p. Club Sedan... 3750	4				5p. Sp. Sedan... 825	4	2595	ahn		5p. Sedan... 4650	4	4934	aefghlmnr	5p. Coupe... 2095	2	3320	aefghlmnr		
7p. Sedan... 3750	4				5p. Sp. Landau... 875	4	2640	ahn		7p. Sedan... 4750	4	5027	aefghlmnr	5p. Spec. Sedan... 2095	4	3485	aefghlmnr		
5p. Sedan Lim... 3850	4				REO					7p. Limousine... 5250	4	5102	aefghlmnr	5p. Royal Sedan... 2095	4	3520	aefghlmnr		
PEERLESS					"Flying Cloud"					STUDEBAKER					WILLIS-KNIGHT				
"6-60"					2-4p. Roadster... \$1685	2	3350	aefghlmnr		"Dictator"					"Std. 6"				
2-4p. Roadster... \$1195	2	2635	ceghlmnr		5p. Brougham... 1645	2	3355	aefghlmnr		5p. Touring... \$1265	4			2-4p. Roadster... \$995	2		aghr		
5p. Phaeton... 1195	4	2635	ceghlmnr		2p. Sp. Coupe... 1625	2	3445	aefghlmnr		7p. Touring... 1325	4			5p. Touring... 995	4		aghr		
2-4p. Coupe... 1295	2	2775	ceghlmnr		4p. Victoria... 1795	2	3550	aefghlmnr		5p. Club Sedan... 1185	2			2-4p. Coupe... 1045	2	2507	aghr		
5p. Brougham... 1195	4	2850	ceghlmnr		5p. Sedan... 1845	4	3645	aefghlmnr		5p. Sedan... 1265	4	3280	aefghlmnr	5p. Coach... 995	2	2816	aghr		
5p. Sedan... 1195	2	2780	ceghlmnr		5p. Del. Sedan... 1995	4	3645	aefghlmnr		2p. Bus. Coupe... 1265	2			5p. Sedan... 1095	4	2858	aghr		
5p. Sedan... 1295	4	2905	ceghlmnr		"Wolverine"					4p. Victoria... 1345	2			"Great 6"					
2-4p. Coupe... 1895	2	3225	ceghlmnr		4p. Cabriolet... 1195	2	2850	aefghlmnr		4p. Royal Cab... 1395	2			2-4p. Roadster... 1850	2	3486	aghr		
5p. Sedan... 1895	4	3355	ceghlmnr		5p. Brougham... 1195	2	2930	aefghlmnr		5p. Royal Sedan... 1395	4	3415	Bghjlmnr	5p. Touring... 1850	4	3675	aghr		
4p. Victoria... 1895	4	3240	ceghlmnr		5p. Sedan... 1295	4	3090	aefghlmnr		"Commander"				2-4p. Cab Coupe... 1995	2	3726	aghr		
7p. Sedan... 1995	4	3420	ceghlmnr		ROAMER					4p. Sedan... 1495	4	3665	aghr	4p. Foursome Sed... 2195	4	4012	Bghlmnr		
"8-81"					2p. Roadster... \$1595	2	3450	ag		5p. Victoria... 1545	2			5p. Sedan... 1995	4	4003	aghr		
5p. Phaeton... 1540	4		aefghlmnr		2p. Coupe... 1750	2	3225	ag		5p. Sedan Regal... 1665	4	3815	Bghjlmnr	7p. Touring... 2285	4	3943	aghr		
7p. Touring... 1595	4		aefghlmnr		5p. Sedan... 1795	2	3380	ag		"President"				5p. Coupe... 2295	2	3939	aghr		
2-4p. Coupe... 1595	2		aefghlmnr		"8-80"					4p. State Rdstr... 1850	2			7p. Sedan... 2595	4	4112	aghr		
4p. Victoria... 1595	4		aefghlmnr		2p. Roadster... 1895	2	3310	ag		4p. State Cab... 1850	2			7p. Limousine... 2695	4	4146	aghr		
5p. Sedan... 1595	4		aefghlmnr		2p. Coupe... 1985	2	3410	ag		4p. State Vic... 1850	2			"Spec. 6"					
5p. Sedan... 1595	4		aefghlmnr		5p. Brougham... 1985	2	3440	ag		5p. State									

# Mechanical Specifications of Current Passenger Car Models

This list comprises current cars distributed on a national basis only. Data for previous models back to 1920 will be found in the Chilton Catalog and Directory

MAKE AND MODEL	Wheel Base (Inches)	Tire Size	ENGINE										ELECTRICAL SYSTEM					REAR AXLE	BRAKES		Steering Gear—Type and Make	Rear Spring—Type and Length	Chassis Lubrication—	ABBREVIATIONS—NAMES OF MFRS. OF STOCK PARTS									
			Make and Model	Number of Cyls.	Rated H.P.	Piston Displacement	Valve Arrangement	Maximum Brake Horsepower at Specified Speed	Compression Ratio	Camshaft Drive	Piston Material	No. Main Bearings	Dampers	Oiling System	Oil Cleaner?	Carburetor	Air Cleaner?		Ignition System	Generator and Starter Make					Clutch—Type and Make	Gear Set—Type and Make	Universal—Type and Make	Type and Make	Gear Ratio	Foot—Type and Location	Hand—Type and Location	4-Wheel Type	
Auburn.....	76	28x5 25	Lyc.....	WS.....	6-27x4 1/2	19.8	185 L	7	7	88-3200	5.05	Ch.	Al.	4	Y	PG	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	A-Ber—American-Bosco
Auburn.....	88	30x6 00	Lyc.....	GT.....	8-28x4 1/2	26.4	247 L	7	7	116-3300	5.35	Ch.	Al.	4	Y	PG	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	A-K—Atwater Kent
Auburn.....	115	30x6 20	Lyc.....	4MD.....	8-31x4 1/2	26.4	247 L	7	7	74-2800	4.36	Ch.	B.	4	Y	PG	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	A-L—Auto-Lite
Buick.....	115	30x6 20	Own.....	Own.....	6-31x4 1/2	26.4	247 L	7	7	74-2800	4.36	Ch.	B.	4	Y	PG	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Ada—Adams
Buick.....	121 & 129	32x6 75	Own.....	Own.....	6-31x4 1/2	31.5	310 L	7	7	90-2800	5.3	Ch.	Ni	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Al—Alameda
Cadillac.....	341	32x6 75	Own.....	Own.....	6-31x4 1/2	31.5	310 L	7	7	90-2800	5.3	Ch.	Ni	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Alm—Alameda
Chandler.....	Big 6	32x6 00	Own.....	Own.....	6-31x4 1/2	31.5	310 L	7	7	90-2800	5.3	Ch.	Ni	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chandler.....	118	30x6 50	Own.....	Own.....	6-31x4 1/2	23.4	331 L	7	7	80-3200	5.0	Ch.	Ci	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chandler.....	Royal 85	32x6 50	Own.....	Own.....	6-31x4 1/2	23.4	331 L	7	7	80-3200	5.0	Ch.	Ci	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chandler.....	124	32x6 50	Own.....	Own.....	6-31x4 1/2	23.4	331 L	7	7	80-3200	5.0	Ch.	Ci	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chrysler.....	National	30x4 50	Own.....	Nat'l.....	4-31x4 1/2	36.9	340 L	7	7	94-3200	4.5	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chrysler.....	65	30x4 50	Own.....	Own.....	6-31x4 1/2	23.4	331 L	7	7	65-3200	5.2	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chrysler.....	Imperial "60"	30x6 18	Own.....	Own.....	6-31x4 1/2	25.3	249 L	7	7	75-3200	5.0	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Chrysler.....	191	30x6 18	Own.....	Own.....	6-31x4 1/2	25.3	249 L	7	7	75-3200	5.0	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Cunningham.....	V-7	30x6 75	Own.....	V-7.....	8-31x4 1/2	31.5	310 L	7	7	112-3400	6.26	Ch.	Ci	3	Y	PG	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Cunningham.....	99	30x6 00	Con.....	14S.....	8-31x4 1/2	28.8	269 L	7	7	85-3200	5.0	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Daimler.....	St. 8	32x6 19	Own.....	Own.....	6-31x4 1/2	21.6	175 L	7	7	72-2950	5.0	Ch.	Ci	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Daimler.....	1891	32x6 00	Own.....	Own.....	6-31x4 1/2	21.6	175 L	7	7	72-2950	5.0	Ch.	Ci	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	Sid. 6	29x5 00	Own.....	Own.....	6-31x4 1/2	27.3	208 L	7	7	58-3000	5.18	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	Victory 6	31x6 20	Own.....	Own.....	6-31x4 1/2	27.3	241 L	7	7	69-2800	5.18	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	Senior	31x6 20	Own.....	Own.....	6-31x4 1/2	27.3	241 L	7	7	69-2800	5.18	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	125-136	32x6 20	Wla.....	Y.....	8-31x4 1/2	27.3	241 L	7	7	75-3000	5.0	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	14L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141	31x6 20	Con.....	15L.....	6-28x4 1/2	36.4	322 L	7	7	40-2400	4.70	Ch.	Al.	4	Y	PH	N	N	D-R	D-R	P. Long	War	m-U-P	Col.	4.9	4.7	4.7	H	H	Ros	S-56 1/2	Bi	Am—Alameda
Dodge Brothers.....	141																																



# GASOLINE + ETHYL = *high compression performance*

**Y**OU are hearing much about "high compression"... "high compression engines"... "high compression fuel"... "high compression performance."

"What," a great many car owners are asking, "does 'high compression' mean to me?" Here is a simple explanation:

Each cylinder of your engine may be likened to a muzzle-loading gun. The cylinder is the gun; the piston is the bullet; and the mixture of gasoline and air is the powder charge.

The tighter you pack the powder charge in the gun before firing, the greater the force to the bullet. Similarly, the tighter you squeeze—or compress—gas vapor and air in the combustion chamber before ignition, the greater the force of the piston's stroke. In other words, the higher the compression the greater the power.

Higher compression in a gasoline engine is obtained by decreasing the size of the combustion chamber—either by mechanical design or by carbon formation.

Up to the advent of Ethyl Gasoline, the compression of automobile en-

gines was limited by the compression limits of gasoline. For gasoline is not a perfect fuel. It explodes too soon ("knocks") and loses power when squeezed beyond a certain point.

That is why General Motors Research Laboratories developed ETHYL fluid, a compound which controls the combustion rate of gasoline so that as engine compression is raised the "knock" is eliminated. And that is why oil companies are mixing ETHYL fluid with gasoline to form *Ethyl Gasoline*—the standard high compression fuel.

Within the last year, car manufacturers have been able to produce new models of higher compression and greater power. *But the most immediate benefits of Ethyl Gasoline are found among the millions of owners of cars of ordinary compression, because with its use in such cars carbon becomes an asset.*

Ride with ETHYL. See what a great difference it makes on hills and in traffic. No "knocking." Less shifting. Faster pickup. Stop at an ETHYL pump today—it bears the emblem shown at the left.



ETHYL GASOLINE CORPORATION, 25 Broadway, New York City. 56 Church Street, Toronto, Ont., Can.

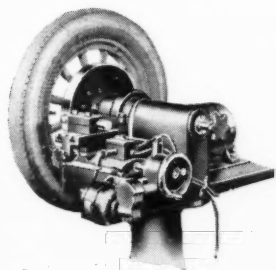
# ETHYL GASOLINE



### Mechanical Specifications of Current Passenger Car Models—Continued

[illegible]





# All This for

1375



An opportunity to obtain—at an astonishingly low price—everything needed for brake service station work. From rivets to brake tester—all for \$1375. Specialize in brake service. Large profits, year 'round business, and what is more important—permanent business. The Raybestos brake service proposition includes:—

1. Raybestos Brake Tester, \$500.
2. Raybestos Drum Lathe. Trues inside or outside of drum without removing drum from wheel or removing or deflating tires. \$525 for passenger cars. (Truck attachments \$110 additional.)
3. Silver Edge or Gold Edge Raybestos.
4. Raybestos C & G Super Wheel Puller with complete set of 24 Adapters, \$60.
5. Raybestos No. 4 Combination drilling and countersinking machine, riveter, rack for rivets, stock of rivets, \$90.
6. Merchandising helps which sell your brake service to owners.

Send Coupon To-day

This equipment is sold by leading jobbers everywhere and each item may be purchased separately, if desired. Mail coupon and let us send you complete details.

## THE RAYBESTOS COMPANY

BRIDGEPORT

## CONNECTICUT

machine, riveter, rack for  
of rivets, \$90.  
g helps which sell  
service to owners.

MA  
MAIL THIS COUPON  
THE RAYBESTOS CO., Bridgeport, Conn.  
Gentlemen.—Send me details on Brake Tester and  
brake service equipment proposition.

helps which sell  
vice to owners.

our-  
ails.

**MAIL THIS COUPON**

**THE RAYBESTOS CO., Bridgeport, Conn.**

Gentlemen:—Send me details on Brake Tester and com-  
plete brake service equipment proposition.

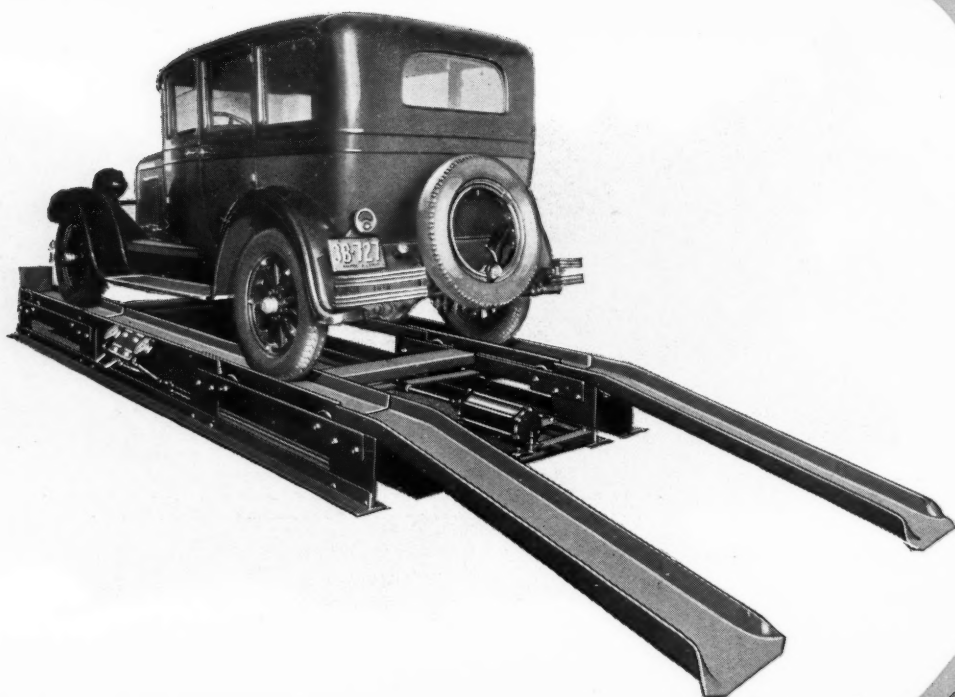
name .....

Firm name

Street \_\_\_\_\_  
City \_\_\_\_\_

Tobber's name





# Raybestos BRAKE TESTER

\$ 500

F.O.B. NILES, OHIO

WITH its many *exclusive* features, the Raybestos Brake Tester is undoubtedly the most unique tester on the market. There are many outstanding advantages. All essential parts visible. Operated from one position. Requires no pit. Exactly reproduces road conditions represented by sliding platforms of tester. Accurate tests whether tires are wet or dry. Car is driven up ramps onto platforms without slowing down to ride over rolls. "Electric lights tell the story." Operated from left side, close to pedal depressor. 3 checks—pressure gauge, indicator lights, moving platforms.

Length 21 feet. Width 5 feet 8 in. Height 16 in.  
Weight approximately 2200 lbs. Manufactured  
Under Kraft Patent No. 1601739.

Ask Your Jobber



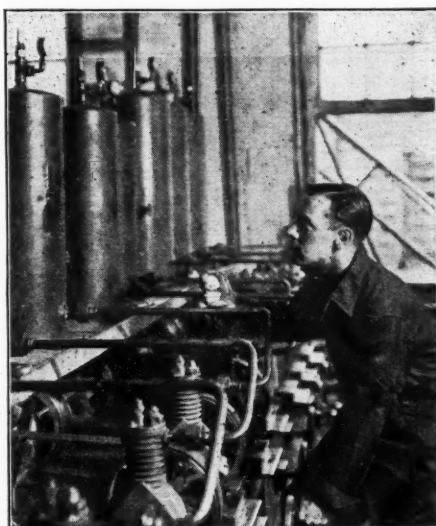


## CURTIS COMPRESSORS

# We test them so you can rely on them

Why has Curtis been the standard compressor for automotive use throughout the world from the very beginning of the automobile industry until the present day?

Because there is honest worth *all through* a Curtis, not only on the outside but in the parts you never see! In addition to correct up-to-the-minute design, skilled manufacture and constant testing, each compressor is tested *under actual working conditions* to assure perfect operation!



## All Curtis Equipment has 75 successful years behind it

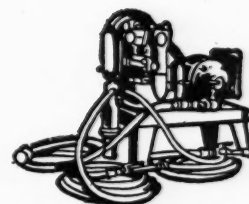
Price isn't everything when you are buying a compressor! Probably you'll put the compressor away in a back room and expect it to do its work for years with mighty little attention or care. *How can you expect such service if all you look at now is price?*

Long-time dependability in a compressor does not get there by accident. Someone *designed* dependability into it, *built* dependability into it, and *tested* it before delivery

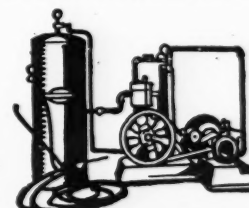
to see that the dependability expected was *actually being delivered*.

For three quarters of a century Curtis has been building machines that last; for a third of a century has specialized on pneumatic engineering, and on quantity production of quality compressors, air lifts, car washers, etc.

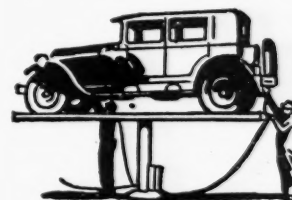
Don't buy on price alone but on *price compared with value*. You will buy a Curtis if you investigate!



**Hydraulic Car Washer**  
1 H.P.; 2 H.P.; 3 H.P. over-size. A low priced washing outfit. Guns provide both body spray and strong cutting stream.

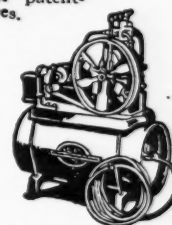


**Compressed Air Washer**  
A complete cleaning service. Operates cleaning attachments, pneumatic tools and inflates tires, besides washing more cars cleaner than any other washer.



**Curtis Rotating Lift**  
Roll-on or free wheel type. Held safely in position by positive oil lock. Pitless type. Prices greatly reduced.

**Style "V" Compressor**  
Single or two-stage  $\frac{1}{4}$  to 5 H.P. Controlled splash lubrication and other patented features.



**Curtis Air Stand**  
Reel type and tower type. No whipping of hose.



# Curtis

## ST. LOUIS

Gentlemen:  
Please send me, without obligation, information about

.....

Name.....

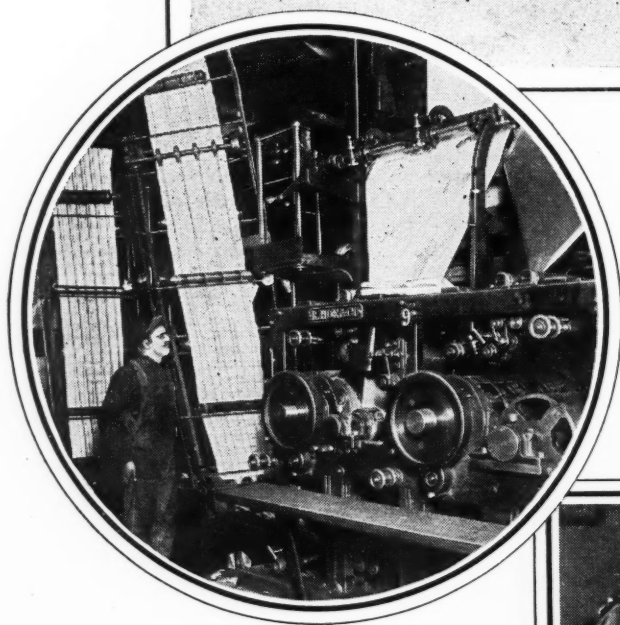
Address.....

City.....State.....

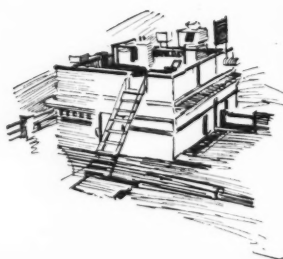
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# Denatured Alcohol

## A Dramatic Story



*BUR-R-R-R! Certainly looks cold, doesn't it? Seems hard to believe that Winter is just around the corner. But 'twill soon be here . . . and with it comes a genuine profit-making opportunity for dealers who sell Denatured Alcohol. Better get that sign up right away . . . and check your stock to see if there's plenty of Denatured Alcohol on hand for a big demand.*



*From the Weather Bureau at Washington flashes news of Cold Weather Warning. We wire the newspapers and Denatured Alcohol ads are on the street in no time.*



### Cold Weather Coming

*Millions of motorists will read these Denatured Alcohol advertisements in leading newspapers all over the country. "Cold Weather Coming" the ads say. Motorists are told to hurry out and protect those radiators with Denatured Alcohol . . . the safe anti-freeze. Three million more will read double and single page ads in the Saturday Evening Post.*



# Advertising Plan Told in Pictures

**H**ERE'S the story of a dramatic new Denatured Alcohol campaign . . . the strongest ever put behind an anti-freeze.

Right now . . . in newspaper press rooms all over the country . . . Denatured Alcohol Ads are waiting.

When the Weather Man says "Cold Weather Coming" we wire the newspapers in cities due for a temperature drop.

In no time at all, millions of motorists are reading the Denatured Alcohol ads . . . being urged to make use of this famous anti-freeze protection before the zero weather sets in.

That's part of the plan. The other part consists of big dramatic advertisements in The Saturday Evening Post . . . and a national hook-up of

the leading Radio Stations in the country, featuring daily weather forecasts.

Be sure you have an abundant supply of Denatured Alcohol on hand right now. And get up that Denatured Alcohol sign. An attractive fibre outdoor sign—it pulls the drivers into the shops that display it prominently. Remember the only way to get business is to go aggressively after it.

And by all means, offer your customers Free Testing Service. An Alco-Tester will be sent to any dealer who clips a dollar bill to the coupon below and mails it to us immediately. A Denatured Alcohol protection chart goes with every Alco-Tester. The fibre sign will be sent free. Mail coupon today!

## Who Wants Money?

*Yes sir, there's real money in selling Denatured Alcohol. And best of all, it's winter money . . . and that's hard to get in the automobile business.*

*Free Testing Service is a big new idea in Denatured Alcohol merchandising. Better clip the coupon and get an Alco-Tester and chart Right Now!*

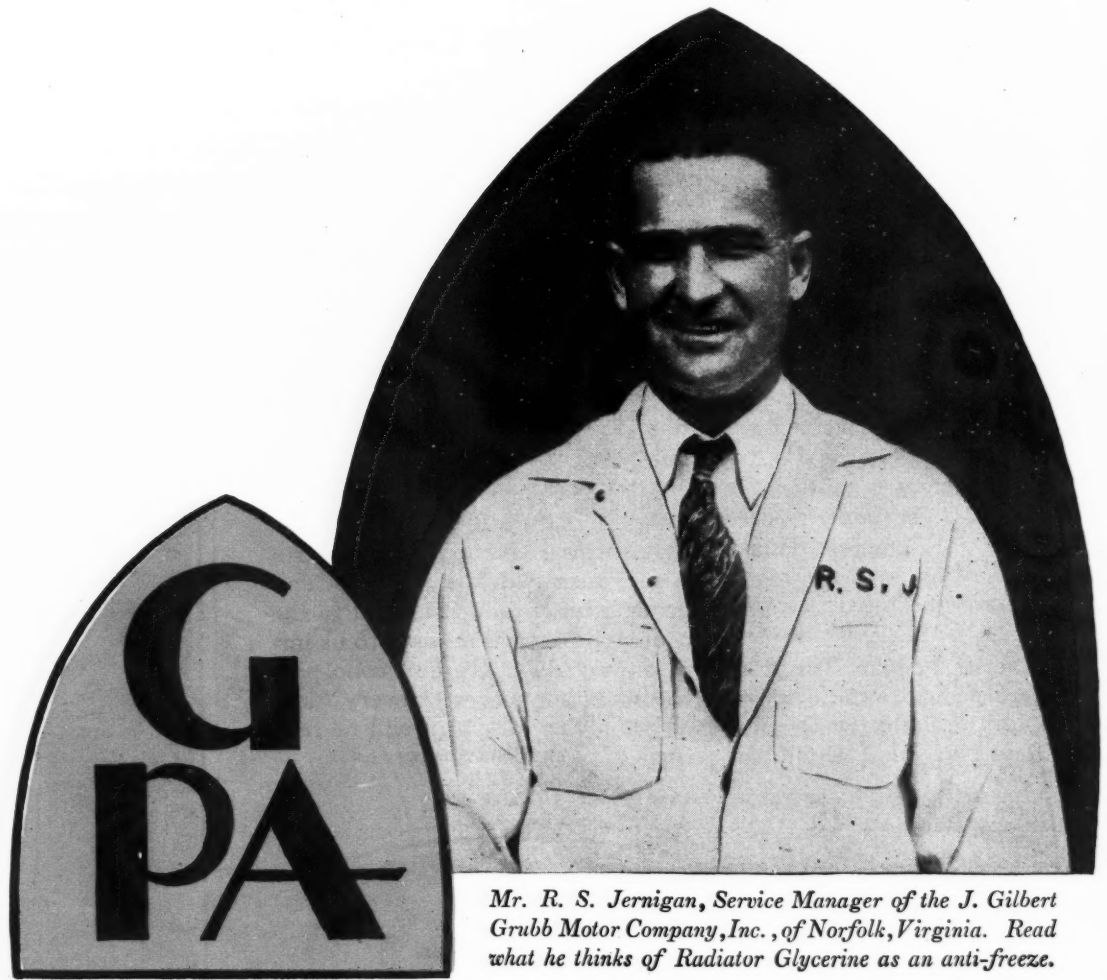


"CHEAP INSURANCE, THIS," says the motorist. "Gambling with a frozen radiator certainly doesn't pay." Note the prominently displayed Denatured Alcohol sign.

## Mail Coupon Today

The Industrial Alcohol Institute, Inc.,  
30 East 42nd St., New York, N. Y.  
☐ Here's my dollar for the Alco-Tester and protection chart.  
☐ Send me the free fibre sign.  
Name.....  
Address.....  
City.....  
State.....

"Our sales next winter



REG. U.S. PAT. OFF.

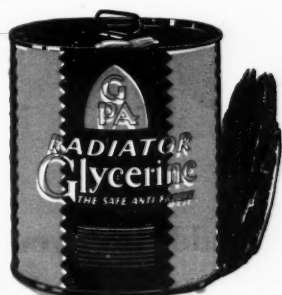
*Mr. R. S. Jernigan, Service Manager of the J. Gilbert Grubb Motor Company, Inc., of Norfolk, Virginia. Read what he thinks of Radiator Glycerine as an anti-freeze.*

**RADIATOR**  
**Glycerine**  
**THE SAFE ANTI-FREEZE**



# will be far in excess of last season"

—R. S. Jernigan



"VIRGINIA? Why I didn't know they ever needed an anti-freeze in such a warm climate," said a dealer from the Canadian border.

This letter from Mr. R. S. Jernigan explains why, and it also explains why Radiator Glycerine has been especially welcomed by motorists in the South. Mr. Jernigan is the Service Manager for the J. Gilbert Grubb Motor Company, Inc., Oakland and Pontiac Distributors of Norfolk, Virginia. He writes:

"In a climate such as we have here with occasional very cold days and many warm ones during the winter, the use of anti-freeze solutions that evaporate is dangerous. Such a solution becomes weakened by evaporation during the warm weather and there is apt to be insufficient freeze protection when a cold snap arrives unexpectedly.

"Last winter we recommended the use of your Radiator Glycerine made according to the Glycerine Producers' standards and were thoroughly pleased with the absolute protection which one filling afforded our customers throughout the winter.

"We not only like Radiator Glycerine

because it does not evaporate, but because it is odorless and will not injure the finish on a car.

"It is expected that our sales next winter will be far in excess of last season. We are recommending it to our customers as the best anti-freeze to be obtained."

Why do so many cars freeze-up in winter, even when anti-freeze is used? Because ordinary anti-freeze evaporates. Its protection fades away.

Glycerine doesn't evaporate. One filling lasts all winter. You don't have to keep adding more. You don't have to keep guessing about it.

Radiator Glycerine has other advantages. It has no odor. It won't smell up the car. Furthermore it won't hurt the car finish. It's as safe for the car as water.

Thousands of motorists use it. Amundsen took it to the North Pole. Give your customers the benefit of its "safe" protection. Tighten the cooling system to prevent leakage. Then put in Radiator Glycerine and you will win satisfied customers and profitable business.

GLYCERINE PRODUCERS' ASSOCIATION, 45 EAST 17TH ST., NEW YORK CITY

8

# RECORD- BREAKING MONTHS!

**N**OW August adds its sweeping plurality to Willys-Overland's impressive total for 1928.

Eight consecutive months have now broken every record for the corresponding months in all of Willys-Overland's 20-year history!

FOURS

**Whippet**

SIXES

**WILLYS-KNIGHT SIX**



# Greatest August in WILLYS-OVERLAND history— 68% gain over last year!

Last month 68% more people bought Whippet and Willys-Knight cars than in August 1927—a gain of more than two-thirds!

Willys-Overland is one of the three largest producers of automobiles in the world—and it follows that its franchise is one of the three most valuable.

And this is Willys-Overland's record year!

WILLYS-OVERLAND, INC., TOLEDO, OHIO  
WILLYS-OVERLAND SALES CO., LTD., TORONTO, CANADA

FOURS

**Whippet**

SIXES

**WILLYS-KNIGHT SIX**



## A Guarantee that protects Completely

THE strongest tire protection ever written now stands behind the Vulco Tire. This broader guarantee protects the user for **One Full Year** not only against defects, but also against injuries including even bruises, rim-cuts and blowouts. This **complete protection** is worth a lot both to the dealer and to the user—and it comes without a cent of extra cost. It is backed by the best known name in Rubber Accessories—the name “Gates Vulco”—a name you will find on rubber products on over half of all the cars on the road today. More than 10,000,000 motorists know the name Vulco and have confidence in this name. Now they are getting in the Vulco Tire the most complete tire protection that they have ever had.

# VULCO TIRES

Manufactured by The Gates Rubber Company, Denver, U. S. A.



# "Cheap" lacquer isn't cheap at all *That's just applesauce!*

There's no room for "applesauce" in the finishing trade. Most experienced finishers know that "cheap" lacquer isn't cheap at all.

Expense piles up behind it. A "cheap" lacquer won't cover—it requires more gallons—doesn't flow evenly—clogs the spray—takes more time to polish. Labor bills mount up.

And with all this trouble and expense, even the most skillful finishers can get only a cheap-looking, short-lived job. Poor quality is too much of a handicap.

A profitable business can't be built that way.

On the other hand, Opex Lacquers—made of finest materials and especially adapted by master scientists to the individual demands of various industrial finishes—cost less money on the job than so-called "cheap" lacquers.

"Opex" covers more surface, works more easily, requires less sanding and polishing and so reduces finishing costs. It gives you a beautiful, rich, durable finish that raises the value of your product. It is the dependable "quality" lacquer to help build a sound, profitable business.

***THE SHERWIN-WILLIAMS Co.***

*Largest Paint and Varnish Makers in the World*

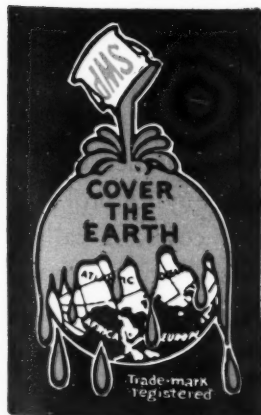
Cleveland, Ohio



## "Modern Automobile Finishing Methods"

The new Opex book discusses fully the most successful methods of refinishing automobiles, from the quick to the high class job. A valuable handbook for the experienced finisher, a complete textbook for the beginner.

# SHERWIN-WILLIAMS



# LACQUERS

***THE SHERWIN-WILLIAMS Co.***

420 Canal Rd., N. W., Cleveland, Ohio

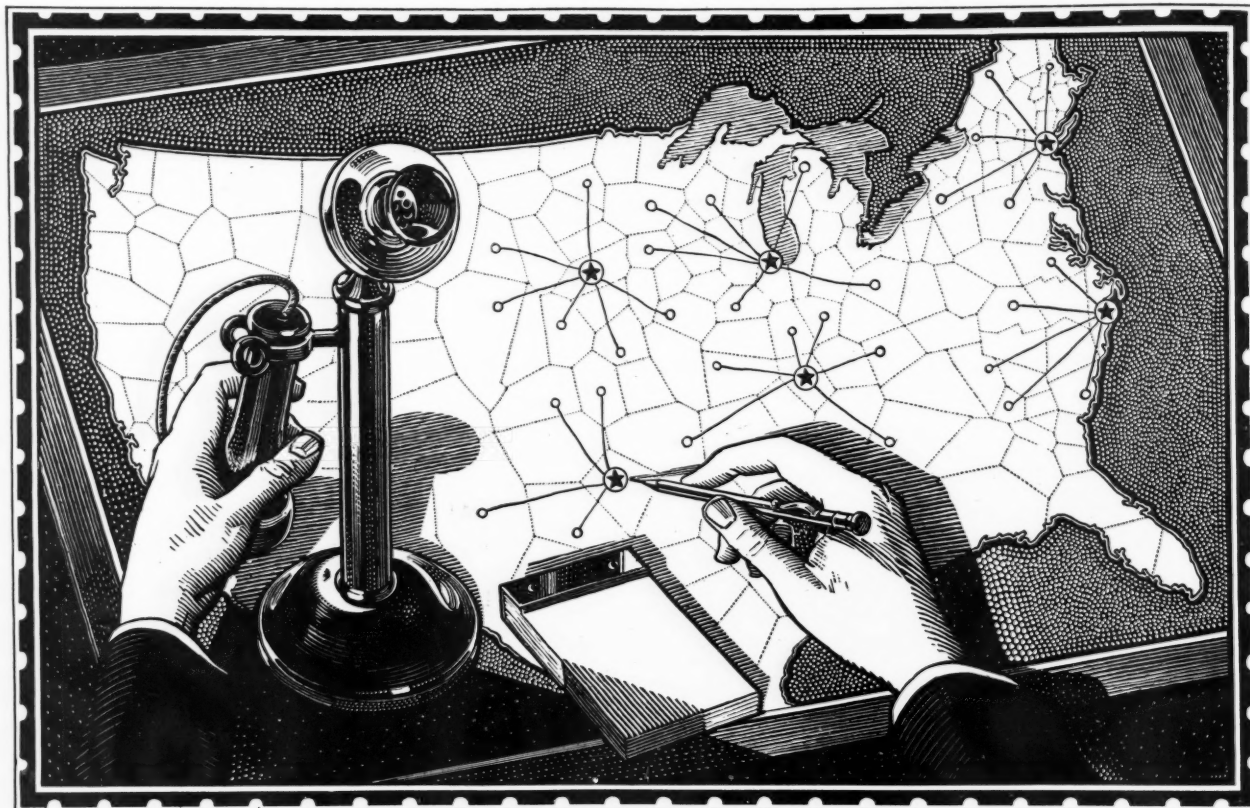
Please send me complete data on Opex Automotive Lacquer Enamels.

Business Title.....

Address.....

City..... State.....

# This National key town map Free to Anyone interested in cutting Costs



## *⌘ An Advertisement for Bell Long Distance Telephone Service*

To LOWER distribution costs, business is turning to the key town method of buying and selling by telephone. By this plan each representative can "travel" farther, reach more people, buy and sell more—and cut expenses.

The national key town map, showing key towns and their calling areas, is now ready. This and regional maps may be obtained at any Bell Telephone business office. They are free.

Key town plans work like this. The sales or purchasing representative goes to the key towns in person. From each he makes his contacts by telephone with customers and prospects in that area. Expensive visits in person are made

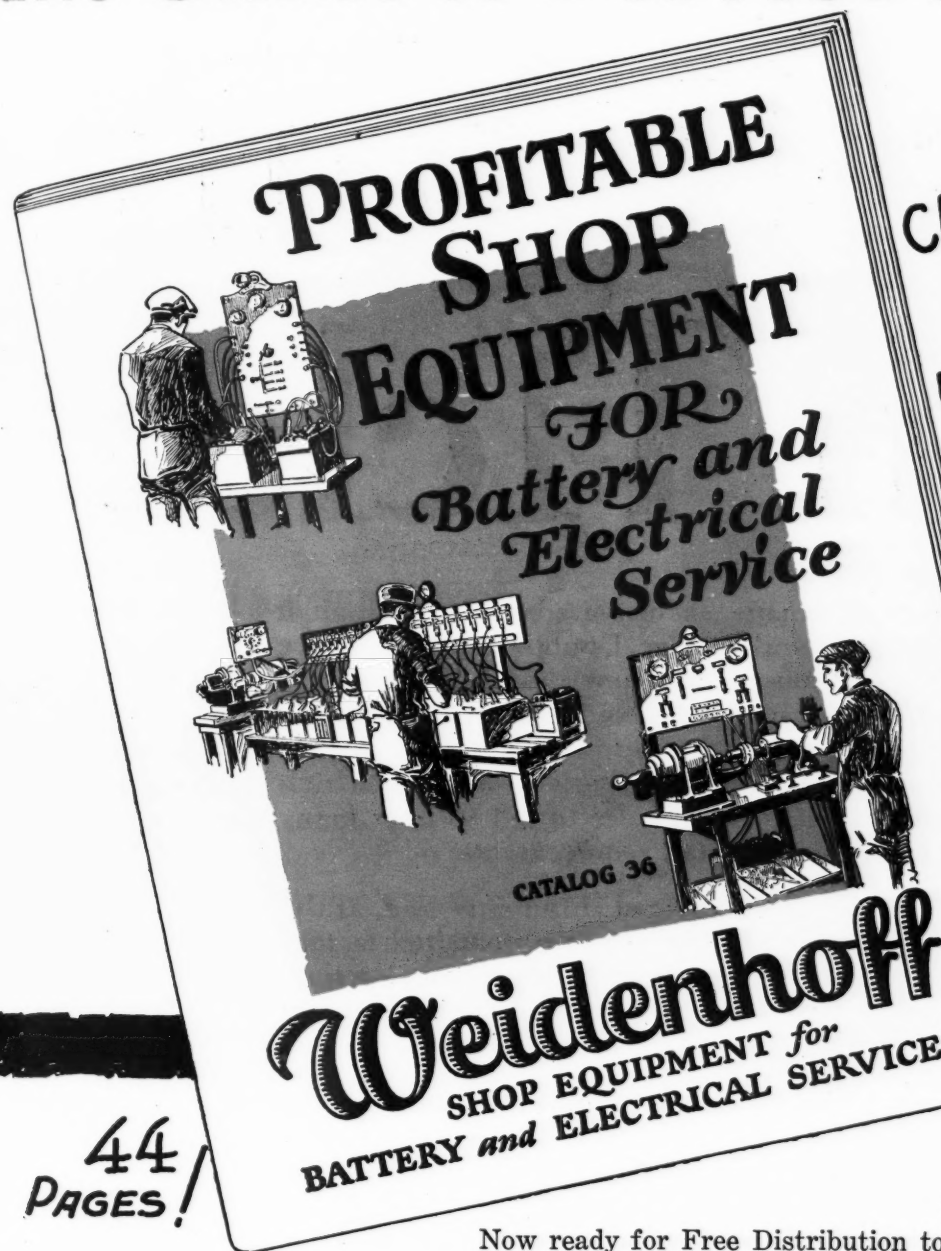
less often; yet by telephone more frequent and up-to-the-minute relations are maintained.

Related telephone services supplement the key town plan. Classified business telephone directories furnish lists of prospects, sequence calling lists save hours of time, the Bell System credit plan makes it possible to have bills for calls sent to home offices—avoiding the carrying of cash and helping in keeping records of contacts. Thus, Long Distance can be custom-made to fit your selling or buying problems—to increase business, yet lower costs. A call to your Bell Telephone business office will bring a copy of the national key town map to you. . . . . Number, please?





# The Guide to Service Success



For  
 CAR DEALERS  
 TIRE SHOPS  
 BATTERY SHOPS  
 ELECTRICAL SERVICE STATIONS  
 GARAGES  
 SUPER SERVICE STATIONS  
 REPAIR SHOPS  
 AUTO LAUNDRIES  
 BUS AND FLEET OPERATORS

Now ready for Free Distribution to the entire automotive trade. It is more than a catalog. It is a valuable guide in equipping and conducting a service station to meet today's automotive service requirements. It points the way to the profit possibilities in this highly essential service. Though of great value to you it costs you nothing. The coupon below is for your convenience. Send it today.

**JOSEPH WEIDENHOFF, INCORPORATED**  
 4358 Roosevelt Road, Chicago, Ill.

JOS. WEIDENHOFF, INC., 4358 Roosevelt Road, Chicago, Ill.

Motor Age 9-13-28

We are interested in a WEIDENHOFF TEST BENCH. Please send your New Catalog G, No. 36 showing the complete line of Battery and Electrical Shop Equipment data. It is understood that this inquiry does not obligate me in any way. We are engaged in the business checked below: (Please mention your jobber's name).

- ☐ Car Dealer  
☐ Auto Laundry  
☐ Electrical Service Station

- ☐ Storage Garage  
☐ Tire Shop  
☐ Super-Service Station

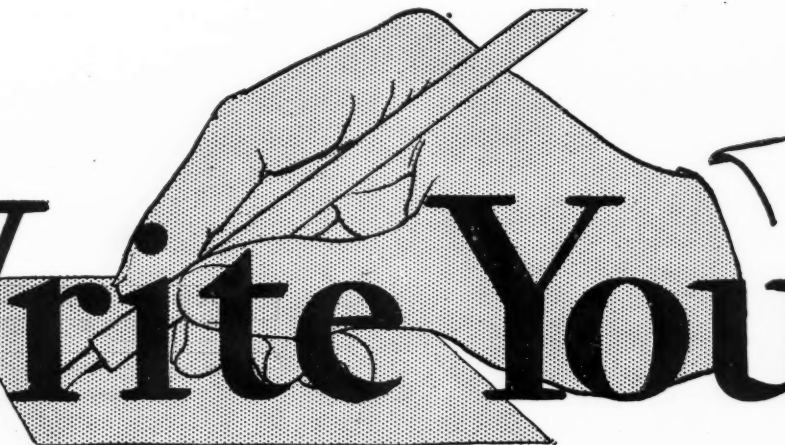
- ☐ General Repair Shop  
☐ Radio Shop  
☐ Battery Shop

Name  
 City

Address

State

Jobber's name



# Write Your Own Ticket

Because of the many exclusive advantages which it offers, the Oakland-Pontiac Double-Profit Franchise has attracted thousands of new dealers beneath the Oakland banner in recent years. But no one phase of this great franchise has attracted so many dealers as Oakland's plan of distribution—a plan which enables *each individual dealer* to tell us how many cars he needs for his retail requirements.

No "overloading"—no forced shipment—and, at the same time, because of Oakland's unmatched factory facilities, no lack of cars in any body type at any time of the year. In full truth, Oakland-Pontiac dealers "write their own tickets".

Investigate Oakland's plan of distribution to learn what advantages it provides. Learn all about this and other phases of the Double-Profit Franchise which is making Oakland-Pontiac dealers prosperous in every section of the United States. A two-cent stamp used in asking for this information may pay you big dividends. Write Dept. C today!

OAKLAND MOTOR CAR COMPANY, PONTIAC, MICHIGAN

**OAKLAND-PONTIAC**  
*Double-Profit*  
**Franchise**





It's a cinch  
for

**JUMBO**



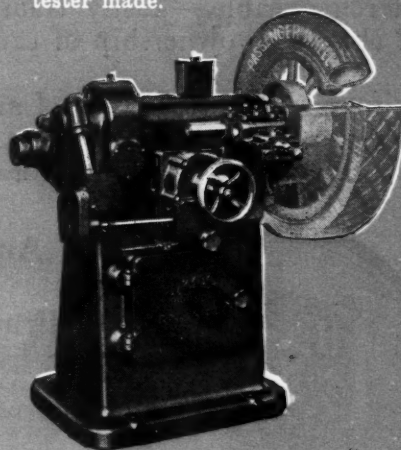
**IT'S** a cinch for Jumbo Equipment to multiply your profits on repair and service work. Every Jumbo machine is specially designed to meet a definite need—a definite market which exists wherever cars or trucks are operated.

Price-Hollister-made equipment means cutting of overhead—doing every job faster, easier and more economically than any other method or machinery can do it. Endorsed the world over for its service-giving, profit-building efficiency.

**THE PRICE-HOLLISTER COMPANY**  
ROCKFORD, ILL.

Export Department: 140 W. 42nd Street, New York City  
Cable Address "JUMBO", all Codes

**JUMBO GIANT BRAKE TESTER**  
Speed—volume—accuracy! Handles up to 50 cars per day. Shows driver the need for brake adjustment, re-lining and drum truing. Automatic. No estimating or figuring. Finest, most profitable tester made.



**JUMBO BRAKE DRUM TURNING AND GRINDING MACHINE**  
Trues inside and outside of brake drums of cars and trucks rapidly and accurately. Fully automatic. Trouble-free. Only universal machine for both turning and grinding. Soon pays for itself.

THE PRICE-HOLLISTER CO., Dept. P-9  
Rockford, Ill. Please send data on

- ☐ Giant Brake Tester  
☐ Brake Drum Machine  
☐ Complete catalog of Jumbo Equipment

Name.....  
Address.....  
Business.....



—and a complete  
program of  
Sales Helps/

**JUMBO EQUIPMENT.**

**MAKES SERVICE PAY...**

# Every car owner buys a set on sight

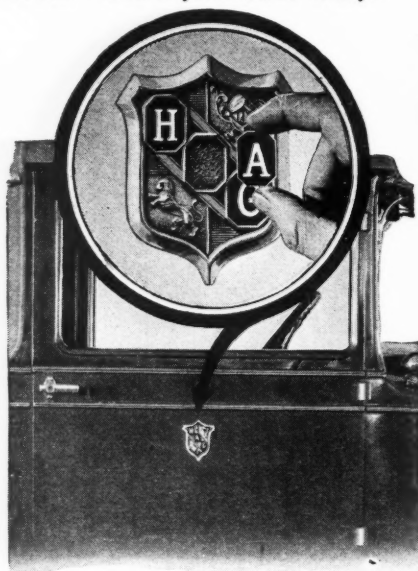
\$1<sup>50</sup> to \$2<sup>25</sup>

## PROFIT FOR YOU ON EACH JUNIOR SET

Every pair of Universal *Junior* Monogram crests—more popular than ever and in greatest demand by small car owners everywhere—come packed with an individual bottle of jeweler's cement and instruction sheet. They cost you \$1.25—You sell them over the counter for \$2.75 per pair complete—\$3.50 if you install them—a *clear profit of \$1.50 to \$2.25 on each sale . . .* Easy to install on doors. Anyone can do it. Best of all, initials are interchangeable—easily transferred in the case of change of ownership of car . . .

### Universal Crests for the Larger Cars

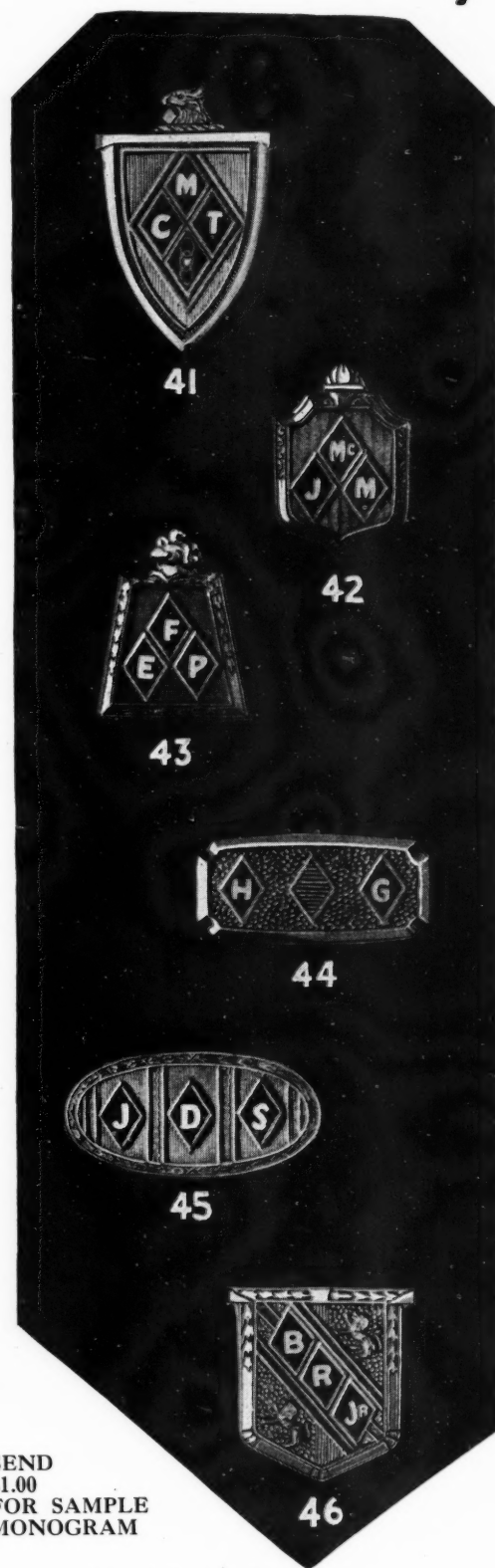
cost you \$1.50 per pair and retail at \$5—a clear profit of \$3.50 on each sale. One car distributor made \$2,400 in one month. Order your stock today.



### An Expensive Display Frame—FREE!

Universal Monograms are wrought of pure nickel silver by master jewelry craftsmen—then triple electroplated with *pure gold or silver*. Lend individuality and pronounce distinctive ownership to the car. With an original order for 18 pairs of assorted *Junior* crests and 200 assorted initials and lodge emblems—total cost \$28.50—we furnish *free* an expensive display frame containing six sample crests and convenient stock box.

# Universal Monograms



SEND  
\$1.00  
FOR SAMPLE  
MONOGRAM

Universal Monogram Co.,  
4424 Broadway, Chicago, Ill.  
(Export Dept., 126 Liberty St., New York)

Gentlemen: Enclosed please find \$1 for which I am to receive one set of sample monograms (Retail Price \$3.50 attached), also complete information including prices, discounts, etc.

NAME .....  
ADDRESS .....  
CITY ..... STATE .....





◆ *Largest producers of*  
*Denatured Alcohol* ◆

**U.S. INDUSTRIAL ALCOHOL CO.**

*Executive Offices: 110 East 42nd Street, New York, N. Y.—Branches in all principal cities*

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# The Organization I

*Today...*

we join fortunes with the  
three Graham brothers

The Scott A. Rogers Co.



WE ARE glad to announce that we have joined the three Graham brothers as distributors of Graham-Paige motor cars in Cleveland and the surrounding territory — having taken over the entire holdings of the Graham-Paige Company of Ohio.

We are familiar with the business careers of the three Graham brothers. We know they have high ideals of personal and business integrity and are an unusual trio in automobile manufacturing, merchandising and financing.

In the year that has passed since they returned to the automobile industry we have watched their remarkable progress — with sales for six months in 1928 exceeding those of any 12 months in 18 years. In Cuyahoga County for the same six months, Graham-Paige sales show the greatest percentage of increase for any line of motor cars.

We have carefully studied the Graham-Paige line, and are deeply impressed by it — a line of beautiful, modern motor cars of substantial values.

For the present we will continue to be located at 2020 Euclid Avenue. To our many friends, and the many more whom we hope to meet and serve in the future, we extend a cordial invitation to inspect the complete line of Graham-Paige motor cars now on display.

THE SCOTT A. ROGERS CO.

2020 Euclid Avenue

Cleveland, Ohio

**GRAHAM-PAIGE**

*Cleveland, Ohio*

*Ft. Wayne, Ind.*

*Raleigh, N. C.*

*Jackson, Miss.*

*Houston, Tex.*

*Bell as in name*

**GRAHAM-PAIGE**



# Is Steadily Growing



Hundreds of distributors and dealers have joined our organization since January, when the new line of Graham-Paige motor cars was introduced.

These new distributors and dealers are business men of Character, Capability and Capital—men whom we are proud to have associated with us.

There are still available opportunities for men of this type. Open territories are being closed as production facilities are increased. The organization is steadily growing.

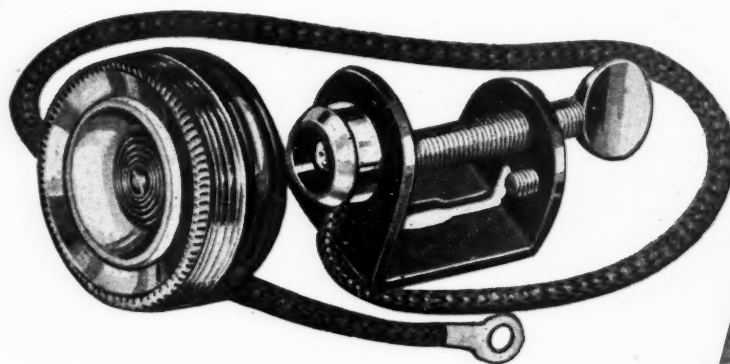
*Joseph D. Graham  
Robert C. Graham  
Ray A. Graham*

*Address communications to:*

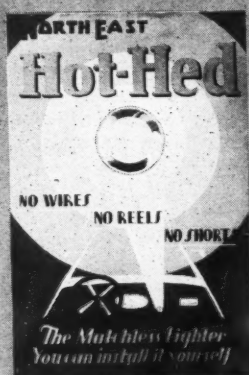
Graham-Paige Motors Corporation  
Detroit, Michigan, U. S. A.

# GRAHAM-PAIGE

# NORTH EAST Hot-Hed



This card in your window tells the motorist looking for a Hot-Hed that you have them.



**NO DRILLING  
NO REELS  
NO CABLES**

*But big daily profits*

Hot-Heds meet the fast-growing demand for a good, inexpensive cigar lighter that always works. Hot-Heds sell like hot cakes.

So simple—press in, snap off, light up, pass around. Good for four or five lights. No installation problem—any buyer can attach his own with a few turns of the thumb-screw.

We help you sell—with Saturday Evening Post advertising, Demonstrator Stands for your counter, Display Material, Mailing Pieces and Stickers. Try a carton of 10 for a start. After that you'll probably order by the hundred.

Hot-Heds Retail at **\$2<sup>50</sup>**

*A good, big profit on every sale*

**NORTH EAST SERVICE INC.**

Rochester



New York

*Service Stations all over the world*



## This Display Sells Tow Lines!

Sell these! Every motorist *will buy* this newest improvement in tow-lines—the Atlantic Automobile Tow Line. A 12 ft. length of high grade, special alloy pliable steel. It pulls 5 tons—yet fits the car pocket.

Priced to sell at a glance. One dollar—quick selling—no sales resistance—volume means profit.

To help you sell—get the brilliant colored display sign—ready for action on your counter. Buy Atlantics from your Wholesaler, or if he cannot supply you, order a dozen for a starter direct.

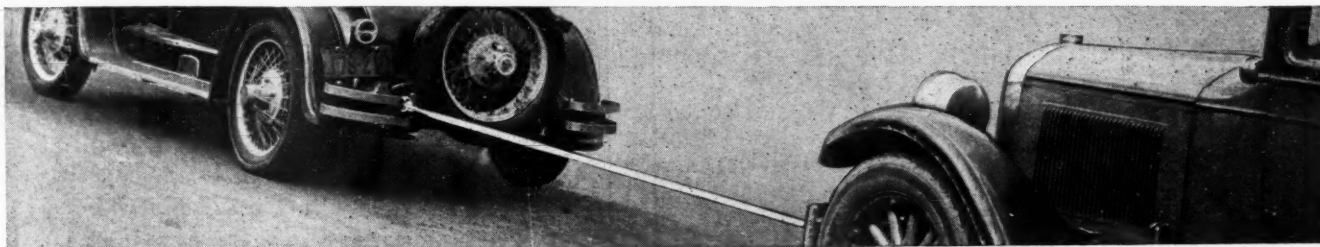
Atlantic Tow Line Manufacturing Co.  
509 Boardwalk Atlantic City, N. J.

\$1



*This attractive display for your counter will bring extra dollars to your cash register.*

## THE ATLANTIC AUTOMOBILE TOW-LINE



## Buy This \$2<sup>00</sup> Brake Lining Stretcher

**Saves Time!**



*for a Better Reline Job*

You'll do a better reline job with a P A M Stretcher. It holds the lining under tension, *tight against the shoe surface*, while it is being drilled and riveted into place. It operates efficiently on all types of internal brake shoes, especially the Bendix type and on the new Ford and Chevrolet. Save time! Make more money on brake relining. Send \$2.00 today.

Protex-A-Motor Mfg. Co.  
Pittston, Pa.



*The Right Bearing For Every Car*

## Bearings With a Reputation



Angular Contact Radial Bearing



Thrust Bearing

The reputation of B. C. A. BALL BEARINGS is upheld by a never-relaxing system of inspection. From the raw steel to the finished bearing, every operation is carefully checked to insure accuracy. That is why the manufacturers of motor cars with a reputation choose B. C. A. BEARINGS.

**Bearings Company of America**  
LANCASTER, PA. DETROIT MICH. OFFICE  
1012 FORD BLDG.

## Kodaloid

### For Flexibility and Transparency

In renewing open car side curtains with new windows it is essential that they be replaced with a material having true flexibility and the highest possible transparency.

Kodaloid (Eastman transparent sheeting) is unique in its transparency, flexibility, great strength, high natural luster, and freedom from color. It is easy to work and its use assures the greatest amount of customer satisfaction. The moral is obvious. If you want to build up a high-grade curtain business, please your customers to the utmost—use Kodaloid.

Mail the coupon below for a free sample of Kodaloid.

Eastman Kodak Company  
Chemical Sales Division Rochester, N. Y.

Eastman Kodak Company  
355 State Street  
Rochester, N. Y.

Gentlemen:

Please send me free sample of Kodaloid for testing.

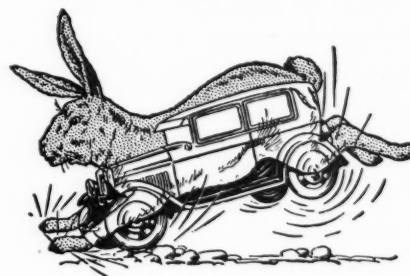
Name .....

Address .....

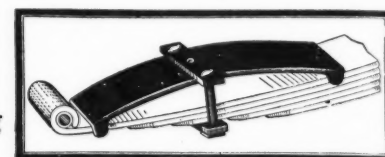
My jobber's name is .....

Address .....

Take that *Jack Rabbit*  
out of your car



Stop that  
galloping,  
jumping  
and jarring  
with



### BEAR FLEXO-SPRINGS

They do the work other Snubbers  
are supposed to do—but *don't*

**Complete Set of 4, Only \$10.00**

Positively guaranteed to give satisfaction or money back

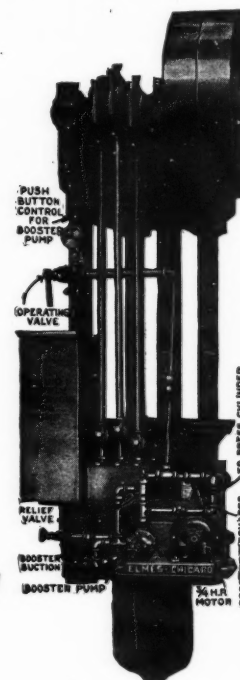
Takes only 15 minutes to install

Write for Special Discount

**BEAR MFG. COMPANY,** Rock Island  
Illinois

### SPEED UP TIRE SERVICE

More  
than  
1,000  
Service  
Stations  
and  
fleet  
owners  
use  
Elmes  
tire  
applying  
presses.



Our  
Booster  
Pump  
may be  
used on  
any make  
of press.

It gives  
customers  
the Best  
Service  
they can  
buy and  
Speeds up  
Saturday's  
Rush  
Work and  
Overtime  
Jobs.

325-Ton Press With Booster  
Pump for Fast Work

**CHARLES F. ELMES ENGINEERING WORKS**  
233 N. MORGAN STREET, CHICAGO, U. S. A.

**E-HYDRAULIC-ELMES**  
SINCE 1851





The short visor on the modern car makes every new car buyer a prospect for *Visorite*. Fits any visor, can be attached in a few seconds with patent clamps. *No holes to drill*. Attractive—well made—casts a soft green light which dispels all glare.

Lists at \$2.95

Ask your jobber's salesman. If he cannot supply you, write direct giving his name.

**SAYLOR MFG. CO., DENVER, COLO.**  
2205 Champa Street

There's always  
something new just  
at hand for the  
regular reader of  
**MOTOR AGE**

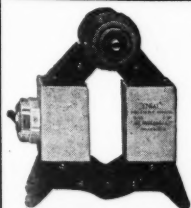


## How to Satisfy "Bill Kicker"

Bill Kicker is the tough customer who kicks over greased upholstery and marked fenders. The safest and most profitable way to do his work is to protect the car inside and out with **CAR OVERALLS**—made of strong striped Denim. Install quickly. Write for prices.

**KEEP KLEAN AUTO PRODUCTS CO., INC.**  
16 E. 176th Street New York City

**MONOGRAM**  
Radiator Caps  
GEAR SHIFT BALLS, ORNAMENTS  
THE KINGSLEY-MILLER COMPANY · CHICAGO



## IDEAL ADJUSTABLE GROWLER

A hinged device to test all armatures from 3/4" to 10" diam. Ideal Adjustable Growlers make the proper span eliminating core or slot shorts. Guaranteed satisfactory or money refunded. Get prices and sales offer.

**J. J. ANKENBRANDT**  
2140 WAKEMAN ST. TOLEDO, O.

**CANTON** TWO TON  
With Safety  
FRICTION BRAKE

**\$175**

**PAY FOR IT  
OUT OF  
EARNINGS**

When you pay \$175 for a CANTON with Safety Friction Brake you get what will LAST FOR MANY YEARS. Used by Ford, Dodge, Packard, White, etc. Ratchet and pawl type, \$125 for the 2-ton size. The Safety Brake easily installed on new or old Cantons—\$50. Meets all state safety codes. Locks load at any point. Load must be wound down. Ask about our Easy Payments. Write for 48-page catalog.

**CANTON FOUNDRY & MACHINE CO.**  
CANTON, OHIO

## New Dover Flexo Service Can

Unsurpassed and made to last



A necessity in every service and filling station. The flexible pouring tube stores inside the can when not in use.

Sold thru Jobbers!

5 gals.....\$5.00 ea.  
2 gals.....3.50 ea.

**DOVER STAMPING & MFG. CO.**  
Cambridge A, Mass.

## UNIVERSAL SPRAY GUN

The Universal equips you to do spring lubrication, engine cleaning, painting, etc. You can add \$3 clear profit to your bill on every job.



**\$12.00**

### QUICK PROFITS

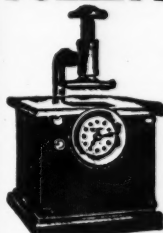
for garages, service stations and repair shops.

The Universal Sprays oil, paint, cleaning liquid with equal efficiency. Air can be connected at either end of handle. New low price \$12.00. Write today.

**ECONOMY MACHINE PRODUCTS CO.**  
5213-14 Lawrence Ave. Chicago, Ill.

## FOLLETT'S NEW MODEL TIME STAMP

accounts for every labor minute



Learn the interesting details from our descriptive data.

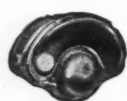
Prints the year, month, day, hour, minute, A.M. or P.M. at the exact moment the plunger is pressed—like this, for example:

**NOV 19 1920 4 31 AM**

Tells when a job is started—and when it is finished. There can be no dispute over the time charge.

Absolutely automatic — except for winding. Every machine guaranteed.

**Follett Time Recording Co., 217 High Street, Newark, N.J.**  
"Established Since 1904"



Model A-AA  
for  
Passenger Cars

A waving red light is the universal danger signal. Here is a positive warning stop light, with positive profits. Write today for complete information.

*The*  
**ILER ELECTRICAL MFG. CO.**  
5103 Lakeside Avenue, Cleveland, Ohio

THE **DURANT** LINE  
IS A BRILLIANT SUCCESS

**DURANT MOTORS, Inc.**  
250 West 57th St., New York, N. Y.

Factories: Elizabeth, N. J.—Lansing, Mich.—Oakland, Cal.—Toronto, Canada

**R & R SUPER POWER CYLINDER HEADS**

For Chevrolets and Racing Equipment

**R & R MANUFACTURING CO.**

CABLE ADDRESS RCO

ANDERSON, INDIANA

**LANDIS Shock Diffusers**

*Now Ready for*

FRANKLIN, PACKARD, MARMON  
CHRYSLER IMP. 80, HUPMOBILE CEN. 8

LANDIS ENG. & MFG. CO.  
AUTOMOTIVE DIV. WAYNESBORO, PENNA.

**FLEXO**  
Trade Mark Reg.  
COMBINATION  
PISTON RINGS

**Guaranteed**

Two combination rings of special design with Expanders of finest Swedish steel. Guaranteed to seal cylinder and centralize pistons, eliminating oil pumping, piston slap and compression loss when properly installed. Write for details.

The Wel-Ever Piston  
Ring Co., Toledo, Ohio



**Neil's**

Rewound Armatures

NEIL ARMATURE CO.

CANTON, O.

**For More than 20 Years**

Advance Products have been the standard quality packings for automotive replacement.

**TENAX** for Heat **TANPAC** for Oil

ADVANCE PACKING & SUPPLY CO.  
808 Washington Blvd., Chicago, Ill.

With the World to choose from  
they chose  
**HOUDAILLE**  
Hydraulic Double-Acting  
SHOCK ABSORBERS  
for the ride  
HOUE ENGINEERING CORP., Buffalo, N.Y.

NEW! **MOBILATOR** NEW!  
Automatic Starter Control  
THE GREATEST AUTO DEVELOPMENT IN RECENT YEARS—  
just push in the clutch to start your motor. Write for particulars. Distributors wanted.  
MOBILATOR CORP., 2816-333 N. Michigan Ave., Chicago

**WADELL**

True Vision

BRAKE

& DRUM

GAUGE

**No MORE GUESSING**

*No more readjustments*

Install a WADELL TRUE VISION BRAKE AND DRUM GAUGE in your shop and do a perfect job that saves your time, pays you better and builds your business. Write today.

WADELL ENGINEERING CO.  
NEWARK, N. J.

**NEW PRICES!**

A new Dealers Net Exchange Price List for Fredericks Lyknu Rewinds is now ready. Free, together with The Fredericks Armature Application List—complete data on every armature since 1920. The Fredericks jobber displays this sign.

H. M. FREDERICKS CO.  
LOCK HAVEN PENNA.

**AUTHORIZED ARMATURE**

Rewinds  
**LYKNU**  
by FREDERICKS  
EXCHANGE SERVICE

Ride along with  
**WATSON PRESTIGE**  
and Stabilator Profits

John Warren Watson Co., Phila., Pa.



**Bigler**

Better Built Trunks

BIGLER MANUFACTURING CO.  
CHIPPEWA FALLS, WIS.

**The Hand Operated Brake Tester!**

License Pat. No. 1264770  
Other Pats. Pending.



The patented Linendoll Auto Brake Tester gives all information necessary for equalizing brakes on any car or light truck! \$37.50 complete. Write us!

THE NORWALK AUTO PARTS  
COMPANY  
Norwalk, Ohio

Gen. Sales Office  
Real Estate Trust Bldg.  
Philadelphia, Pa.

Pedal Depressor  
No. 6 Locking Type

**CLASSIFIED ADVERTISEMENTS AND BUSINESS OPPORTUNITIES**

To locate business opportunities  
To sell, rent, exchange or buy  
To find men or employment

THE CLASSIFIED DEPARTMENT  
WILL HELP YOU

FOR SALE—Miller racing car, formerly Tommy Milton's. Holds three world's records. Has about \$2500 worth of extra parts. Priced for quick sale at \$2250. Harry Kohlert, St. Charles, Illinois.

CLASSIFIED ADVERTISEMENTS  
IN "MOTOR AGE" ALWAYS BRING  
RESULTS.

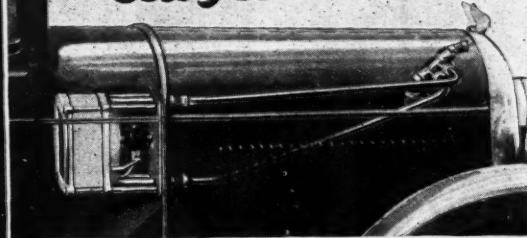


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### Chrysler "72"



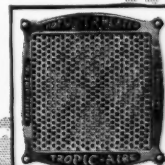
**Heat**  
when you  
want it  
with  
the  
**TROPIC-AIRE**  
HOT WATER  
Automobile Heater

Pat. Numbers: 1581761; 1668490; 1668491

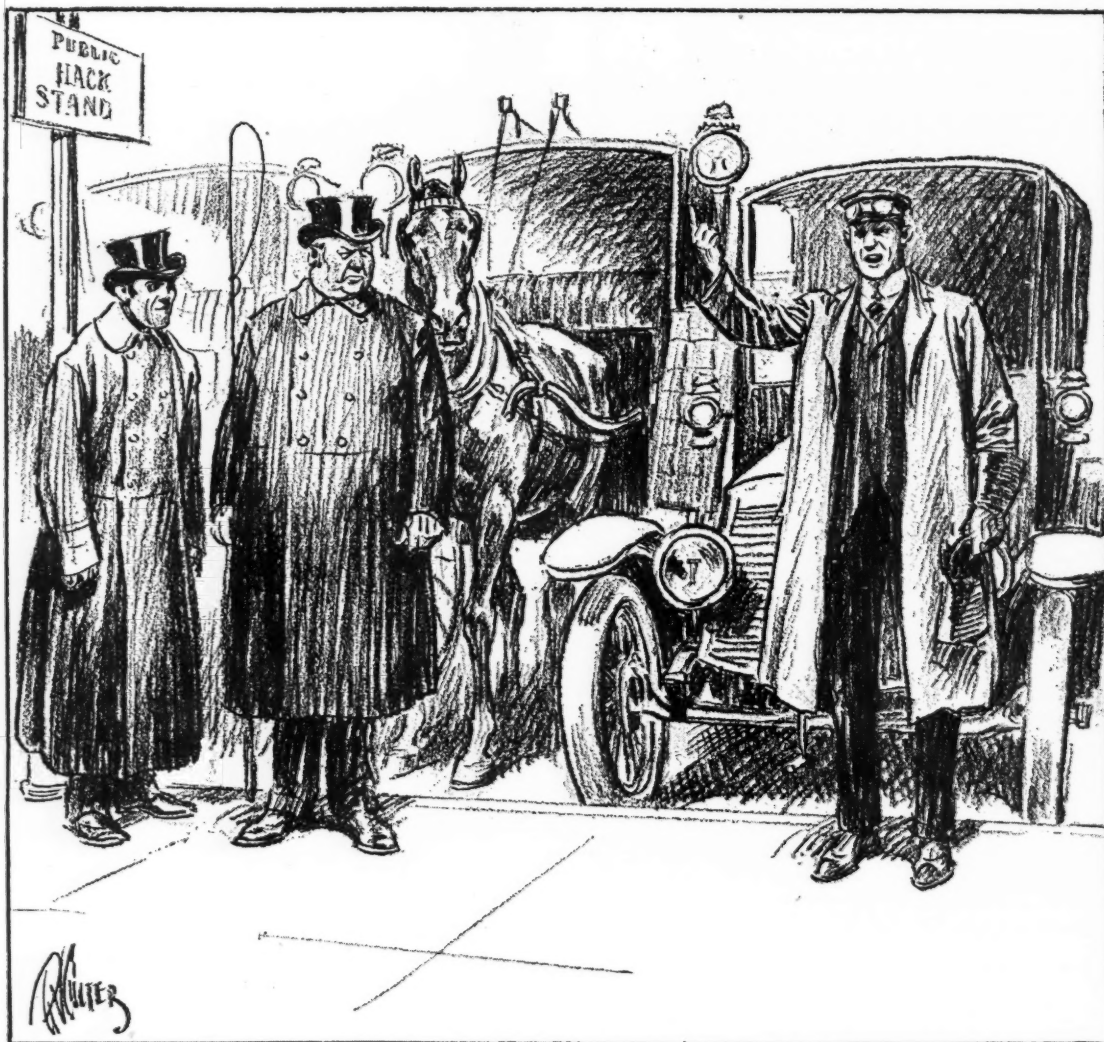
*For Passenger Cars,  
Motor Buses and  
Taxicabs*

—clean, steady heat, circulated throughout the car—that's what car owners want and that's what is selling Tropic-Aire! Thousands now in use. Our big, national selling program will make Tropic-Aire one of your most profitable accessories this Fall and Winter.

**Tropic-Aire, Inc.**  
1030 Ramsey St., N. E.,  
Minneapolis, Minn.



*The Fan is the Thing*



In 1907 . . .

"HUH!" SAYS CABBIE TERENCE (EXTREME LEFT), "THEM GAS BUGGIES IS ALL RIGHT FOR NUTS TO PLAY WIT', BUT WHEN PEOPLE WANTS TO GO PLACES DEY WANTS A HORSE." "I HOPE YOU'RE RIGHT, TERENCE," SAYS GLOOMY GUS (CENTER). 'T WAS WITH SUCH MANIFESTATIONS OF CORDIALITY AND OPTIMISM THE CAB RANK WELCOMED THE FIRST GASOLINE TAXI (EXTREME RIGHT) IN 1907.

**T**ODAY the tick of the taxi-meter is heard throughout the land. At almost any curb, by a twitch of the finger, you can summon a slice of the rainbow on wheels.

Most likely the wheels are Budd-Michelins.

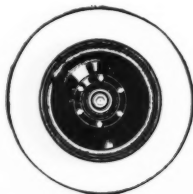
For these wheels seen on the smartest cars of Europe and America have won the hard-headed taxi companies on the basis of safety and convenience. No matter how stiff a blow they take in a crash, they cannot shatter or collapse. If a Budd-Michelin bends, the spare fifth wheel takes its place. For \$3 or so the damaged wheel can be fixed. The same little fracas would smash a wooden

wheel, tie up the car for hours and cost the price of a tow and a brand new wheel.

That same convenient extra wheel simplifies tire-shifting. When there's a flat to change, it comes off with the wheel—and the spare Budd-Michelin goes on. It needn't take over four minutes.

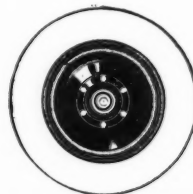
Budd-Michelins' graceful, curving discs dress up the smart, trim car of today. And their smooth surfaces are easy to wipe or wash.

The man who can say all this about the wheels on the car he's selling, knows how often "Budd-Michelin equipped" closes a sale for him.



# BUDD

WHEEL COMPANY, DETROIT



*Also makers of the Budd Interchangeable Wire Wheel and Budd Dual Wheel*



There is only  
one thing any-  
one need know  
about carbur-  
eters—the name  
of a good one  
**CARBURETER**

T. M. REG.

CARTER CARBURETOR  
CORPORATION, ST. LOUIS  
DIVISION OF AMERICAN  
CAR AND FOUNDRY CO.





## *Ever-Growing Public Favor* **Offers Ever-Greater Chances For Profit**

**I**T IS simply good business for the forward-looking automobile dealer to attempt to ally himself with the manufacturer whose product is consistently the public favorite.

There never was a time when the name of Chrysler was getting more attention or meant more to the automobile public.

Everywhere you hear Chrysler spoken of and praised. You hear of Chrysler products all in eager demand and buyers literally waiting in line.

This favor is the logical development of a process that has been going on for nearly five years.

Chrysler's position today is only what might be expected of a company that started with Chrysler's jump on the field and maintains that margin by the outstanding originality and worth of its products.

You owe it to yourself to become acquainted with the greater chance for profit which such a line-up with Chrysler offers. Let us hear from you. We shall keep your inquiry in strictest confidence.

CHRYSLER SALES CORPORATION, DETROIT, MICHIGAN  
CHRYSLER CORPORATION OF CANADA, LIMITED, WINDSOR, ONTARIO

# CHRYSLER



